DOE F 4250.3
(04-94)

U. S. Department of Energy

ORDER FOR SUPPLIES OR SERVICES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER	1. CONTRACT NO. *(If any)*	3. ORDER NO.	4. REQUISITION/REFERENCE NO.
6/25/03		DE-AB01-03ME04154.M000	01-03ME04154.000

5. ISSUING OFFICE *(Address correspondence to)*
U.S. Department of Energy
1000 Independence Ave. , S.W.
Washington, DC 20585
BUYER Ryan Miller B/NC: A269 NO. 287-1487 CODE ME-641.2

6, SHIP TO: *(Consignee and address, ZIP Code)*
U.S. Department of Energy
1000 Independence Avenue SW, ME-411
Washington D.C. 20585
SHIP VIA: Michael Watkins (FOR) and Kenneth Grossnickle (GTN)

7. TO: CONTRACTOR *(Name, address and ZIP Code)*

MARTEC SERVICES INC.
2652-R WEST PATAPSCO AVE
BALTIMORE, MD 21230
Attn: RAYMOND WHELTLE

TIN# 52-1575690

8. TYPE OF ORDER

✓ A. PURCHASE-Reference your Quotation Date 6/09/03

Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheets, if any, including delivery as indicated. This purchase is negotiated under authority of:

☐ B. DELIVERY-Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

9. ACCOUNTING AND APPROPRIATION DATA

DOLLARS: -0-

10. REQUISITIONING OFFICE
(202) 586-6944 (FOR)
(301) 903-7050 (GTN)
PROJ. OFF. Michael Watkins (FOR) and Kenneth Grossnickle (GTN) NO. CODE: ME-411

11. BUSINESS CLASSIFICATION *(Check appropriate box(es))*

X SMALL	☐ OTHER THAN SMALL	☐ DIS-ADVANTAGED	☐ WOMAN - OWNED

12. F. O. B, POINT DESTINATION	14. GOVERNMENT B/L NO.	15. DELIVER TO F.O.B. POINT ON OR BEFORE *(Date)*	16. DISCOUNT TERMS
13. PLACE OF INSPECTION AND ACCEPTANCE		07/01/03 to 06/30/06	NET/30

17. SCHEDULE *(See reverse for Rejections)*

ITEM NO (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)
	Provide the U.S. Department of Energy (DOE) with all labor, materials, equipment and supervision to perform: Preventative Maintenance for the Forrestal Facility. Routine and emergency services and repair and replace HVAC equipment and install insulation at both the Germantown MD and Forrestal Facilities in Washington D.C. All work will be in accordance with Items 2, 3, 4 & 5. Labor pricing is subject to wage Determination MD020056 dated (04/18/2003) & DC020003 dated (04/04/2003). For materials, related only to routine and emergency services at the Forrestal building the contractor will be required to provide repair parts. The Contracting Officer Representative (COR) will approve repair parts up to $2,000/repair. The COR, at his discretion, may request documentation supporting material charges for repairs ALL PERSONNEL MUST BE U.S. CITIZENS PERIOD OF PERFORMANCE: July 1, 2003 – June 30, 2006 Acceptance : ORIGINAL ON FILE Raymond Wheltle					
1.	LABOR RATES FOR FORRESTAL & GERMANTOWN: EMERGENCY AND ROUTINE REPAIRS (ITEMS 2 AND 3). THE CONTRACTOR SHALL BILL FOR LABOR AT THE RATES ACCORDING TO ATTACHMENT 1 "PRICING MATRIX FOR LABOR". THE CONTRACTOR MUST PAY THEIR EMPLOYEES IN ACCORDANCE WITH THE WAGE DETERMINATIONS DC020003 04/04/2003 AND MD020056 DATED 04/18/2003. IN ATTACHMENTS 5 & 6. THE CONTRACTOR WILL PROVIDE MONTHLY PAYROLL DOCUMENTATION VERIFYING THAT PERSONNEL ARE BEING PAID ACCORDING TO ATTACHMENTS 5 & 6 PRICING MATRIX FOR ALL YEARS FOR FORRESTAL AND GERMANTOWN WILL BE IN ACCORDANCE WITH UNDER ATTACHMENT 1 "PRICING MATRIX FOR LABOR". Continued on Page 2.					

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT 19. GROSS SHIPPING WEIGHT	20. INVOICE NO.		17. (H) TOT. ← *(Cont. (pages)*
	21. MAIL INVOICE TO: *(Include Zip Code)* USDOE, Commercial Payments, P.O. Box 500, Germantown, MD 20875-0500 Telephone: 301-903-4340		-0-	17. (I) ← GRAND TOTAL

22. UNITED STATES OF AMERICA BY *(Signature)* → Craig S. Frame

23. NAME *(Typed)*
Craig S. Frame
TITLE: CONTRACTING/ORDERING OFFICER

ATTN Ryan Miller 202-287-1487 Fx 202-287-1436

DOE F 4250.3 (04-94)

U.S. Department of Energy

ORDER FOR SUPPLIES OR SERVICES

PAGE 1 OF PAGE 8

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER	1. CONTRACT NO. (If any)	3. ORDER NO.	4. REQUISITION/REFERENCE NO.
		DE-AB01-03ME04154.M000	01-03ME04154.000

5. ISSUING OFFICE (Address correspondence to)
U.S. Department of Energy
1000 Independence Ave., S.W.
Washington, DC 20585
BUYER Ryan Miller B/NC: A269 NO. 287-1497 CODE ME-641.2

6. SHIP TO: (Consignee and address, ZIP Code)
U.S. Department of Energy
1000 Independence Avenue SW, ME-411
Washington D.C. 20585
SHIP VIA: Michael Watkins (FOR) and Kenneth Grossnickle (GTN)

7. TO: CONTRACTOR (Name, address and ZIP Code)

MARTEC SERVICES INC.
2652-R WEST PATAPSCO AVE
BALTIMORE, MD 21230
Attn: RAYMOND WHELTLE

TIN# 52-1575690

8. TYPE OF ORDER
✓ A. PURCHASE-Reference your Quotation Date 6/09/03
Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheets, if any, including delivery as indicated. This purchase is negotiated under authority of:
☐ B. DELIVERY-Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

9. ACCOUNTING AND APPROPRIATION DATA

DOLLARS: -0-

10. REQUISITIONING OFFICE
(202) 586-8944 (FOR)
(301) 903-7050 (GTN)
PROJ. OFF. Michael Watkins (FOR) and Kenneth Grossnickle (GTN) NO. CODE: ME-411

11. BUSINESS CLASSIFICATION (Check appropriate box(es))
X SMALL ☐ OTHER THAN SMALL ☐ DISADVANTAGED ☐ WOMAN-OWNED

12. F. O. B. POINT	14. GOVERNMENT B/L NO.	15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date)	16. DISCOUNT TERMS
DESTINATION		07/01/03 to 06/30/06	NET/30
13. PLACE OF INSPECTION AND ACCEPTANCE			

17. SCHEDULE (See reverse for Rejections)

ITEM NO (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)
	Provide the U.S. Department of Energy (DOE) with all labor, materials, equipment and supervision to perform: Preventative Maintenance for the Forrestal Facility. Routine and emergency services and repair and replace HVAC equipment and install insulation at both the Germantown MD and Forrestal Facilities in Washington D.C. All work will be in accordance with Items 2, 3, 4 & 5. Labor pricing is subject to wage Determination MD020056 dated (04/18/2003) & DC020008 dated (04/04/2003). For materials, related only to routine and emergency services at the Forrestal building the contractor will be required to provide repair parts. The Contracting Officer Representative (COR) will approve repair parts up to $2,000/repair. The COR, at his discretion, may request documentation supporting material charges for repairs ALL PERSONNEL MUST BE U.S. CITIZENS PERIOD OF PERFORMANCE: July 1, 2003 – June 30, 2006 Acceptance Raymond Whelte					
1.	LABOR RATES FOR FORRESTAL & GERMANTOWN: EMERGENCY AND ROUTINE REPAIRS (ITEMS 2 AND 3). THE CONTRACTOR SHALL BILL FOR LABOR AT THE RATES ACCORDING TO ATTACHMENT 1 "PRICING MATRIX FOR LABOR". THE CONTRACTOR MUST PAY THEIR EMPLOYEES IN ACCORDANCE WITH THE WAGE DETERMINATIONS DC020009 04/04/2003 AND MD020056 DATED 04/18/2003. IN ATTACHMENTS 5 & 6. THE CONTRACTOR WILL PROVIDE MONTHLY PAYROLL DOCUMENTATION VERIFYING THAT PERSONNEL ARE BEING PAID ACCORDING TO ATTACHMENTS 5 & 6 PRICING MATRIX FOR ALL YEARS FOR FORRESTAL AND GERMANTOWN WILL BE IN ACCORDANCE WITH UNDER ATTACHMENT 1 "PRICING MATRIX FOR LABOR".					

Continued on Page 2.

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT	19. GROSS SHIPPING WEIGHT	20. INVOICE NO.		17. (H) TOT. ← (Cont. pages)
	21. MAIL INVOICE TO: (Include Zip Code) USDOE, Commercial Payments, P.O. Box 500, Germantown, MD 20875-0500 Telephone: 301-903-4340			-0-	17. (I) ← GRAND TOTAL

22. UNITED STATES OF AMERICA → 23. NAME (Typed)
BY (Signature) Craig S. Frame
TITLE: CONTRACTING/ORDERING OFFICER

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO.	ORDER NO.
6/25/03		DE-AB01-03ME04154.M000

ITEM NO (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)
2.	FORRESTAL STATEMENT OF WORK Provide all labor material, equipment and supervision necessary to service and repair all dampers (pneumatic, electric and manual), air handlers, pumps, blowers, exhaust fans, air compressors, values, and piping. Provide all repairs to duct work and all refrigeration repairs (2 Ton thru 100 Tons). Fabricate all ductwork and install A/C compressors. Clean (vacuum and brush) air ducts, vents, coil, air intake pits, air handlers, and fan coil units. Provide balancing of moving equipment and perform ASME Certified welding. Also, provide vibration analysis, machine shop work and fabrication of parts. Perform steam fitting for high and low pressure steam systems. Install and repair domestic water and various other hydronic piping systems. Preventive maintenance to equipment of all Heating, Ventilating, Air Conditioning (HVAC) and plumbing systems. Provide other related heating and air conditioning equipment located throughout the DOE Forrestal Building. Provide other related heating and air conditioning equipment located throughout the DOE Forrestal Building. All employees must wear uniforms identifying the company name and the first name of the employee. All employees must wear safety shoes. Service will be performed Monday through Friday during normal business hours (7:00 A.M. TO 4:00 P.M.), unless otherwise noted. Emergency service and repairs are subject to 24-hour call and require a 2-hour response time. Contractor to provide all supplies, tools, ladders, etc. necessary to perform the work. For materials that are $2,000 or less for an individual repair, the Contracting Officer Representative (COR), at his discretion, will request documentation supporting material charges for repairs The contractor shall provide a material quote(s) sheet(s) from at least two vendors for materials that exceed $2,000 per individual repair. Quote(s) Sheet(s) need not be provided when an individual material item is $75 or less. THE PRICING MATRIX FOR FORRESTAL LABOR RATES IS FOUND UNDER ATTACHMENT 1 "PRICING MATRIX FOR LABOR".					
3.	GERMANTOWN STATEMENT OF WORK. (There are is no Preventative Maintenance Requirement for GTN) Provide all labor, material, equipment and supervision to perform routine repair and emergency service and repairs, replace, and install HVAC equipment at the Germantown Facility. Contractor will service the following equipment: 1. Pumps (1 gpm to 75 gpm) 2. Blowers (12" to 60") 3. Chillers (350 tons to 750 tons) 4. Heaters A. Steam B. Oil Burners 5. Valves (1/2" to 8") 6. Air Compressors (1hp to 25hp) 7. Fans (24" to 60") 8. Motors (1hp to 75hp) 9. Pipes (1/4" - 14") A. Water B. Steam 10. Cooling Towers (350 tons to 750) 11. Air Conditioning Units A. Chilled Water Units (Up to 15 ton) B. Drinking Water Units (5 ton) C. Refrigeration Units (Up to 15 tons)					

CONTINUED ON PAGE 3

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H)) →

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO.	ORDER NO.
6/25/03		DE-AB01-03ME04154.M000

ITEM NO (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)
	Repairs shall include but not limited to the following: 1. Cleansing 2. Greasing 3. Calibrating 4. Belt tightening 5. Checking operation of equipment 6. Oil change 7. Inspecting equipment operation Balancing Routine and emergency service and repairs shall include but not limited to the following: 1. *Furnish and install new shaft, bearings and sheaves on cooling tower* 2. Install new pulleys in motors on cooling tower fan 3. Repair gates valves up to 14" 4. Replace thrust bell on condensate pump 5. Disassemble, clean and inspect pumps and motor and reassemble hydrostatic test units 6. Remove existing packing from valves, cut, fit, and install new packing to valves, reassemble and adjust glands 7. Recondition gate valves, remove of valve bonnets, reforming of in-line machining of body seats 8. Resurface wedge-seating surfaces. Contractor is to provide all supplies, tools, ladders, etc. necessary to perform the work. DOE Germantown will provided all supplies: valve packing, pipes and pipe fittings, new valves, bearings, sheaves and pulleys, v-belts, and any other parts necessary for the repairs. Normal service and repairs will be done Monday through Friday during normal work hours (7am-4pm). Emergency service and repairs are subject 24-hour call. Contractor will have personnel onsite within 2 hours of DOE notification. All employees must wear uniforms identifying the company name and first name of the employee. All employees must wear safety shoes. THE PRICING MATRIX FOR GERMANTOWN LABOR RATES IS FOUND UNDER ATTACHMENT 1 "PRICING MATRIX FOR LABOR". RE-INSULATION: FORRESTAL AND GERMANTOWN FACILITIES Re-insulation work will include, but not limited to, the following: Reinsulated condensate line and ducts, Re-insulated pipes on chill water and steam lines and apple canvas and Re-insulate pipes off headers in Machine Room. All insulators will be made of fibber glass and/or rubber tex will be 1 ½" thick or thicker on pipe size (steel schedule #40 pipe) and rated no lower than 950 degrees F in temperature. Pipes need re-insulation range from ½' to 20" for chill water and steam lines. Insulate piping, air ducts, fitting, elbows, tees, etc., on an as needed basis in machine rooms and building corridors at the Forrestal facility. Insulation work shall possibly include, but not limited to the following: Insulate condensate lines and ducts. Insulate pipes on chilled water and steam lines and apply canvas. Insulate pipe off headers in Machine Rooms. All insulation shall be fiberglass board for ductwork inside machine rooms, fiberglass wrap for ductwork located in corridor office spaces. Insulation for piping shall be pre-formed fiberglass board and/or rubber-tex, shall be a minimum of 1/2" in thickness, and shall be rated no lower than 850 degrees. Pipes needing insulation are steel schedule 40 & 80 and copper water piping and range from 2" to 20" for domestic, steam and chilled water-piping systems. CONTINUED ON PAGE 4					
4.						

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H)) →

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO.	ORDER NO.
6/25/03		DE-AB01-03ME04154.M000

ITEM NO (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)
	Price including all cost associated with the insulation, material, supplies, tools, installation cost including all labor and any other indirect or direct cost associated with the installation. Price also includes the removal and disposal of all non-asbestos insulation. The contractor will not remove asbestos insulation. PRICE MATRIX OF INSULATION FOUND UNDER ATTACHMENT 2: "PRICING MATRIX FOR INSULATION".					
5.	FORRESTAL BUILDING PREVENTIVE MAINTENANCE Provide preventative maintenance of the following equipment located at the Forrestal facility in strict accordance with the GSA services guidelines (Attachment 4). The quantities provided are not guaranteed to be purchased by the Government. Each item will be priced on a firm fixed price basis. The DOE will provide all maintenance parts. Contractor will provide expendable supplies & materials, instruments, tools, ladders, labor cost and any other direct or indirect cost for all items needed to perform the preventive maintenance. Perform maintenance per General Services Administration (GSA) preventive maintenance guidelines for each item. *All contractor services provided under the Blanket Purchase Agreement will* have a minimum of 5 years experience in performing maintenance and emergency service on the line items. PRICING FOR FORRESTAL BUILDING PREVENTIVE MAINTENANCE FOUND UNDER ATTACHMENT 3 " PRICING MATRIX FOR FORRESTAL PREVENTIVE MAINTENANCE". Contracting Officer Representative's Authority The Contracting Officer Representative's (Kenneth Grossnickle for Germantown and Michael Watkins for Forrestal) level of authority for the approval of materials is a maximum of $2,000 per individual repair. When the material estimate from the contractor exceeds $2,000, the Contracting Officer will be the authorising individual. "In accordance with FAR.52.232-33, Mandatory Information for Electronic Funds Transfer Payment, prior to submission of the first request for payment (invoice) under this order, the Contractor shall provide the information required to make payment by Electronic Funds Transfer (EFT) directly to the payment office at U.S. Department of Energy, Capital Accounting Center, Accounts Payable Division (CR-54), P.O. Box 500, Germantown, MD 20875-0500, (telephone number 301-903-4340). In addition, the Contractor shall provide the Taxpayer Identification Number (TIN) to the payment office. Copies of the Payment Information Form – ACH Vendor payment System and Request for Taxpayer Identification Number and Certification (Form W-9) are attached to this order. The Government is not required to make any payment under this order until after receipt, by the designated payment office, of the correct EFT information. Until receipt of the correct EFT information, any invoice submitted shall be deemed not to be a valid invoice as defined in the Prompt Payment clause. The payment office may return the invoice to the Contractor, without payment." CONTINUED ON PAGE 5					

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H)) →

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DATE OF ORDER	CONTRACT NO.	ORDER NO.
6/25/03		DE-AB01-03ME04154.M000

ITEM NO (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)
	ATTACHMENTS: 1. Pricing matrix for Labor- Statement of Work for Items 2 & 3 2. Pricing matrix for Insulation. Statement of Work Item 4 3. Pricing matrix for Forrestal Preventive Maintenance. Statement of Work Item 5 4. General Services Administration Preventive Maintenance Guide. 5. Wage determinations DC020003 04/04/2003. 6. Wage determinations MD020056 04/18/2003. 7. Simplified Acquisition Clauses Contractor may only bill the DOE based on pricing contained in this Blanket Purchase Agreement. Bills or invoices for any other prices(s) will be rejected. Pricing for statement of work in item 2 and 3 will be based on work actually performed on DOE's site. The contractor will not bill for service calls or changed for time for personnel to arrive on DOE's site. INVOICE APPROVING OFFICIAL: Michael Watkins (FOR), ME-411.1 and Kenneth Grossnickle (GTN), or any other ME-411.2 or ME-411.1 Invoice Approving Official. THE CONTRACTOR MUST PROVIDE SEPARATE INVOICES FOR GERMANTOWN WORK AND FORRESTAL WORK. IDENTIFICATION OF WORK PERFORMED MUST CLEARLY IDENTIFY THE DOE SITE OF THE WORK.					

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H)) →

6. Extent of Obligation: The Government is obligated only to the extent of authorized calls/orders actually placed against this BPA.

7. Pricing: By acceptance of this BPA the Contractor agrees that the prices to the government shall be as low as, or lower than, those charges the supplier's most favored customers, for like quantities, in addition to any discounts for prompt payment.

8. Invoices: Invoiced shall be submitted once per month or upon expiration of the BPA; whichever, occurs first, for all deliveries that are received and accepted by the DOE.

ALL INVOICES SHALL INCLUDE THE FOLLOWING:
A). CONTRACTOR NAME AND REMITTANCE ADDRESS
B). BPA NUMBER
C). CALL NUMBER(S), CALL DATE(S), PRICE OF THE ITEM(S)
D). TOTAL AMOUNT OF INVOICE FOR THE MONTH
E). POINT OF CONTACT AND TELEPHONE NUMBER FOR QUESTIONS CONCERNING INVOICE.

Invoices received which do not contain the required data will be returned without payment. Problems relating to payment in excess of 30 days of submission of invoices should be directed to:

US Department of Energy
Office of Comptroller
Commercial Payments
P.O. Box 500
Germantown, MD 20874
Tele. No. (301) 903-4340

9. Call Number: A call number will be given to you by the individual placing the call and shall start with call number 0001 at the beginning of each month. The month will be designated by the standard 3 letter abbreviations, e.g., OCT.-0001, OCT.-0002, DEC.-0001, ect. Any calls accepted from persons other than those listed above are unauthorized, and will not be approved for payment.

10. In accordance with FAR 52.222-8, the Contractor shall submit a copy of their payroll for each week in which contract work is performed. The contractor is required to provide prime and subcontractor payroll record(s) and certification(s) with each invoice for payment. Invoices received without the supporting payroll records will be rejected by the DOE COR.

11. An insurance certificate from the selected firm must be provided to the Contracting Officer prior to award.

In accordance with FAR 52.228-5 **INSURANCE-WORK ON A GOVERNMENT INSTALLATION (APR 1984)** the contractor is required to carry the following minimum insurance:

GENERAL LIABILITY - Third Person Bodily $1,000,000.00
combined single Injury/Property
Damage limit, each occurrence

WORKERS COMPENSATION - Bodily Injury by Accident $100,000
each accident
- Bodily Injury by Disease $500,000
policy limits
- Bodily Injury by Disease $100,000
each employee

ORDER FOR SUPPLIES OR SERVICES
SCHEDULE – CONTINUATION

Mark all packages and papers with BPA Number
Terms and Conditions

12. The contractor is authorized to furnish the supplies or services under the subject BPA to the U.S. Department of Energy upon request by authorized DOE representatives identified below. Individual calls placed against this BPA shall not exceed $25,000 per call.

NAME	ORGANIZATION
Forrestal	
Charles Kuzas	ME-411
Robert Prushinski	ME-411
Darrell Nelson	ME-411
Michael Watkins	ME-411
Lavelle Adams	ME-411
Michael E. Shincovich	ME-411
Germantown	
Harry Callis	ME-411
Randy Huff	ME-411
Virgil Denning	ME-411
Dan Goldston	ME-411
Dave Wilson	ME-411
Ken Grossnickle	ME-411
Michael E. Shincovich	ME-411

INDIVIDUAL CALLS UNDER THIS BPA SHALL NOT EXCEED $25,000.

ATTACHMENT 1 LABOR RATES
DE-AB01-03ME04154.M000

FORRESTAL LABOR RATES

All contractor services provided under the Blanket Purchase Agreement will have a minimum of 5 years experience in performing maintenance and emergency service on the line items. Maintenance to be performed per the attached General Services Administration (GSA) preventive maintenance guidelines for each item.

	Wage Determination DC020003 04/04/2003	**Year One 7/1/03-6/30/04**	**Year Two 7/1/04-6/30/05**	**Year Three 7/1/05-6/30/06**
	Unit Price/HR	Unit Price/HR	Unit Price/HR	Unit Price/HR
a. Plumber Straight Time Rate: Plum0602F.	**$35.39**	**$39.60**	**$41.58**	**$43.66**
b. Plumber Premium Time Rate:Plum0602F (6:00 p.m. to 6:00 a.m., next day)	**$48.75**	**$63.00**	**$66.15**	**$69.50**
c. Laborer Straight Time Rate:SUMD1043A/SUDC1003A.	**$14.06**	**$8.00**	**$8.50**	**$9.00**
d. Laborer Premium Time Rate:SUMD1043A/SUDC1003A. (6:00 p.m. to 6:00 a.m., next day)	**19.98**	**$10.00**	**$10.50**	**$11.00**

Forrestal repairs related to item 2: For work only under item two, the contractor maybe required to obtain repairs parts. The maximum value of the repair parts to be authorized by the COR will not exceed $2,000.00 per repair. Repair parts in excess of $2,000 must be approved by the Contracting Officer with quotations from two distributors for "individual" items exceeding $2,000.00 each The contractor will not charge profit on any repair, however a handling charge of up to 10% may be added to all repair parts

GERMANTOWN MD. LABOR RATES

	Wage Determination MD020056 04/18/2003	**Year One 7/1/03-6/30/04**	**Year Two 7/1/04-6/30/05**	**Year Three 7/1/05-6/30/06**
	Unit Price/HR	Unit Price/HR	Unit Price/HR	Unit Price/HR
e. Plumber Straight Time Rate: Plum0602F.	**$36.89**	**$39.60**	**$41.58**	**$43.66**
f. Plumber Premium Time Rate:Plum0602F (6:00 p.m. to 6:00 a.m., next day)	**$50.65**	**$63.00**	**$66.15**	**$ 69.50**
g. Laborer Straight Time Rate:SUMD1043A/SUDC1003A.	**$11.48**	**$8.00**	**$8.50**	**$9.00**
h. Laborer Premium Time Rate:SUMD1043A/SUDC1003A. (6:00 p.m. to 6:00 a.m., next day)	**$11.48**	**$10.00**	**$10.50**	**$11.00**

For Statement of work items 2 & 3 the contractor will only bill for actual hours worked at the DOE Government site (Germantown/Forrestal). Individual jobs authorized by the DOE based on the labor rate per hour in this attachment, will not be converted to a firm fixed price for the individual job. The contractor

may be required to demonstrate actual hours worked by providing payroll records to demonstrate actual hours worked to the DOE. Any contractor's request for additional hours to complete the work must be authorized in writing by the DOE COR. The contractor will only charge for hours actually provided on DOE sites.

ATTACHMENT 2 RE-INSULATION PRICING MATRIX
DE-AB01-03ME04154.M000

RE-INSULATION: FORRESTAL AND GERMANTOWN FACILITIES

FITTINGS (APROX.) 90DEG. ELLS

ITEM NO.	SUPPLIES OR SERVICES CONT.	QUANTITY	UNIT	Year One 7/1/03-6/30/04 UNIT PRICE	Year Two 7/1/04-6/30/05 UNIT PRICE	Year Three 7/1/05-6/30/06 UNIT PRICE
A	½"	EA.		$ 1.50	$ 1.55	$ 1.63
B.	¾"	EA.		$ 1.50	$ 1.55	$ 1.63
C.	1".	EA.		$ 1.50	$ 1.55	$ 1.63
D.	1-1/4"	EA.		$ 2.00	$ 2.06	$ 2.16
E	1-1/2"	EA.		$ 2.50	$ 2.58	$ 2.70
F	2"	EA.		$ 3.50	$ 3.60	$ 3.79
G	2-1/2"	EA.		$ 4.00	$ 4.12	$ 4.33
H	3"	EA.		$ 5.00	$ 5.15	$ 5.40
I	4"	EA.		$ 7.00	$ 7.21	$ 7.57
J	5"	EA.		$ 9.00	$ 9.27	$ 9.73
K	6"	EA.		$ 10.00	$ 10.30	$ 10.82
L	7"	EA.		$ -	$ -	$ -
M	8"	EA.		$ 12.00	$ 12.36	$ 12.98
N	9"	EA.		$ -	$ -	$ -
O	10"	EA.		$ 14.00	$ 14.42	$ 15.14
P	12"	EA.		$ 16.00	$ 16.48	$ 17.30
Q	14"	EA.		$ 18.00	$ 18.54	$ 19.47
R	16"	EA.		$ 18.00	$ 18.54	$ 19.47
S	18"	EA.		$ 18.00	$ 18.54	$ 19.47
T	20"	EA.		$ 18.00	$ 18.54	$ 19.47
U	Insulate embossed aluminum pump boxes with latches.	SqFt.		$ 30.00	$ 30.90	$ 32.45
V	Removal and disposal of non-asbestos insulation.	EA.		$ 5.00	$ 5.15	$ 5.40

ATTACHMENT 2 RE-INSULATION PRICING MATRIX
DE-AB01-03ME04154.M000

PIPE LENGTH (APPROX.) PER/ LINER FT.

ITEM NO.	SUPPLIES OR SERVICES CONT.	QUANTITY	Year One 7/1/03-6/30/04 UNIT PRICE	Year Two 7/1/04-6/30/05 UNIT PRICE	Year Three 7/1/05-6/30/06 UNIT PRICE
A	½"	Liner Ft.	$ 1.50	$ 1.55	$ 1.63
B.	¾"	Liner Ft.	$ 1.50	$ 1.55	$ 1.63
C.	1".	Liner Ft.	$ 1.50	$ 1.55	$ 1.63
D.	1-1/4"	Liner Ft.	$ 2.00	$ 2.06	$ 2.16
E	1-1/2"	Liner Ft.	$ 3.00	$ 3.09	$ 3.25
F	2"	Liner Ft.	$ 5.00	$ 5.15	$ 5.40
G	2-1/2"	Liner Ft.	$ 6.00	$ 6.18	$ 6.49
H	3"	Liner Ft.	$ 6.00	$ 6.18	$ 6.49
I	4"	Liner Ft.	$ 7.15	$ 7.37	$ 7.74
J	5"	Liner Ft.	$ 7.50	$ 7.73	$ 8.12
K	6"	Liner Ft.	$ 8.30	$ 8.55	$ 8.98
L	7"	Liner Ft.	$ -	$ -	$ -
M	8"	Liner Ft.	$ 10.00	$ 10.30	$ 10.82
N	9"	Liner Ft.	$ -	$ -	$ -
O	10"	Liner Ft.	$ 12.50	$ 12.88	$ 13.53
P	12"	Liner Ft.	$ 14.50	$ 14.94	$ 15.69
Q	14"	Liner Ft.	$ 18.00	$ 18.54	$ 19.47
R	16"	Liner Ft.	$ 18.00	$ 18.54	$ 19.47
S	18"	Liner Ft.	$ 18.00	$ 18.54	$ 19.47
T	20"	Liner Ft.	$ 18.00	$ 18.54	$ 19.47
U	Removal and disposal of non-asbestos insulation.	Liner Ft.	$ 5.00	$ 5.15	$ 5.40

STRAINERS (APPROX.)

ITEM NO.	SUPPLIES OR SERVICES CONT.	QUANTITY	Year One 7/1/03-6/30/04 UNIT PRICE	Year Two 7/1/04-6/30/05 UNIT PRICE	Year Three 7/1/05-6/30/06 UNIT PRICE
A	½"	Liner Ft.	$ 1.00	$ 1.03	$ 1.09
B.	¾"	Liner Ft.	$ 1.00	$ 1.03	$ 1.09
C.	1"	Liner Ft.	$ 1.00	$ 1.03	$ 1.09
D.	1-1/4"	Liner Ft.	$ 1.50	$ 1.55	$ 1.63
E	1-1/2"	Liner Ft.	$ 1.50	$ 1.55	$ 1.63
F	2"	Liner Ft.	$ 3.00	$ 3.09	$ 3.25
G	2-1/2"	Liner Ft.	$ 3.00	$ 3.09	$ 3.25
H	3"	Liner Ft.	$ 4.00	$ 4.12	$ 4.33
I	4"	Liner Ft.	$ 12.00	$ 12.36	$ 12.98
J	5"	Liner Ft.	$ 15.00	$ 15.45	$ 16.23
K	6"	Liner Ft.	$ 15.00	$ 15.45	$ 16.23
L	7"	Liner Ft.	$ -	$ -	$ -
M	8"	Liner Ft.	$ 18.00	$ 18.54	$ 19.47
N	9"	Liner Ft.	$ -	$ -	$ -
O	10"	Liner Ft.	$ 20.00	$ 20.60	$ 21.63
P	12"	Liner Ft.	$ 22.00	$ 22.66	$ 23.80
Q	14"	Liner Ft.	$ 22.00	$ 22.66	$ 23.80
R	16"	Liner Ft.	$ 22.00	$ 22.66	$ 23.80
S	18"	Liner Ft.	$ 22.00	$ 22.66	$ 23.80
T	20"	Liner Ft.	$ 22.00	$ 22.66	$ 23.80
U	Removal and disposal of non-asbestos insulation.	Liner Ft.	$ 5.00	$ 5.15	$ 5.40

ATTACHMENT 2 RE-INSULATION PRICING MATRIX
DE-AB01-03ME04154.M000

L. PIPE LENGTH (APPROX.) PER/LINER FT

ITEM NO.	SUPPLIES OR SERVICES CONT.	QUANTITY	Year One 7/1/03-6/30/04 UNIT PRICE	Year Two 7/1/04-6/30/05 UNIT PRICE	Year Three 7/1/05-6/30/06 UNIT PRICE
	Dept. Of Energy Insulation add on to contract				
1.	Price per foot- 3/8"X 3/8" Wall Rubber Tex thru – 4"X 3/8" Wall Rubber Tex	Liner Ft.	$ 2.00	$ 2.00	$ 2.10
2.	Price foot 3/8"X ½" Wall Rubber Tex thru – 4"x1/2" Wall Rubber Tex	Liner Ft.	$ 2.50	$ 2.50	$ 2.65
3.	Price per foot 3/8" X ¾" Wall Rubber Tex thru 4"x ¾" Wall Rubber Tex	Liner Ft.	$ 3.50	$ 3.50	$ 3.65
4.	Price per foot 3/8"x 1" Wall Rubber Tex thru-4"X1" Wall Rubber Tex	Liner Ft.	$ 4.50	$ 4.50	$ 4.75
5.	Price per sq. ft.- 3/8" Wall, ½ Wall, ¾ Wall, 1" Wall Rubber Tex Covering.	Liner Ft.	$ 2.50	$ 2.50	$ 2.65
6.	All Rubber Tex- to include Rubber Tex Glue	Liner Ft.	$ -	$ -	$ -
7.	Price per sq. ft- Canvas Covering, to include all types of mastic painting of covering.	Liner Ft.	$ 8.50	$ 8.50	$ 8.65
AIR DUCT	Price per sq Ft.- ½" duct board	Liner Ft.	$ 0.25	$ 0.25	$ 0.25
8.	3/4" duct board	Liner Ft.	$ 0.50	$ 0.50	$ 0.50
	1 ½"duct board	Liner Ft.	$ 1.75	$ 1.75	$ 1.85
	1" duct board	Liner Ft.	$ 0.75	$ 0.75	$ 0.85
	2" duct board	Liner Ft.	$ 2.00	$ 2.00	$ 2.10
	4" duct board	Liner Ft.	$ 3.00	$ 3.00	$ 3.00
9.	Price per Ft-Pipe insulation- ½"thick	Liner Ft.	$ 0.25	$ 0.25	$ 0.30
	1" Thick	Liner Ft.	$ 0.75	$ 0.75	$ 0.80
	½" Thick	Liner Ft.	$ 0.25	$ 0.25	$ 0.30
	2" Thick	Liner Ft.	$ 2.00	$ 2.00	$ 2.10
	4" Thick	Liner Ft.	$ 3.00	$ 3.00	$ 3.15
10*	Removal and disposal of non-asbestos insulation.	Liner Ft.	$ 1.00	$ 1.00	$ 1.05

ATTACHMENT 2 RE-INSULATION PRICING MATRIX
DE-AB01-03ME04154.M000

TEE APROX.

ITEM NO.	SUPPLIES OR SERVICES CONT.	QUANTITY	Year One 7/1/03-6/30/04 UNIT PRICE	Year Two 7/1/04-6/30/05 UNIT PRICE	Year Three 7/1/05-6/30/06 UNIT PRICE
A	½"	Liner Ft.	$ 1.50	$ 1.55	$ 1.63
B.	¾"	Liner Ft.	$ 1.50	$ 1.55	$ 1.63
C.	1".	Liner Ft.	$ 1.50	$ 1.55	$ 1.63
D.	1-1/4"	Liner Ft.	$ 2.00	$ 2.06	$ 2.16
E	1-1/2"	Liner Ft.	$ 2.50	$ 2.58	$ 2.70
F	2"	Liner Ft.	$ 3.50	$ 3.60	$ 3.79
G	2-1/2"	Liner Ft.	$ 4.00	$ 4.12	$ 4.33
H	3"	Liner Ft.	$ 5.00	$ 5.15	$ 5.40
I	4"	Liner Ft.	$ 7.00	$ 7.21	$ 7.57
J	5"	Liner Ft.	$ 9.00	$ 9.37	$ 9.73
K	6"	Liner Ft.	$ 10.00	$ 10.30	$ 10.82
L	7"	Liner Ft.	$ -	$ -	$ -
M	8"	Liner Ft.	$ 12.00	$ 12.36	$ 12.98
N	9"	Liner Ft.	$ -	$ -	$ -
O	10"	Liner Ft.	$ 14.00	$ 14.42	$ 15.14
P	12"	Liner Ft.	$ 16.00	$ 16.48	$ 17.30
Q	14"	Liner Ft.	$ 18.00	$ 18.54	$ 19.47
R	16"	Liner Ft.	$ 18.00	$ 18.54	$ 19.47
S	18"	Liner Ft.	$ 18.00	$ 18.54	$ 19.47
T	20"	Liner Ft.	$ 18.00	$ 18.54	$ 19.47
U	Removal and disposal of non-asbestos insulation.	Liner Ft.	$ 1.00	$ 1.00	$ 1.00

ATTACHMENT 3 PRICING MATRIX FOR FORRESTAL PREVENTIVE MAINTENANCE
DE-AB01-03AD04154

Perform maintenance on the following line items per the attached General Services Administration (GSA) preventive maintenance guidelines for each item.

FORRESTAL PREVENTIVE MAINTENANCE ITEMS

PM GUIDE #	ITEM	QTY.	FREQUENCY	AFTER HOURS
A-4	Air Compressor	23	S.A.	
A-11	Air Handling Unit;			
	Under 5000 C.F.M.	14	A	YES
	5000 - 15000 C.F.M.	10	A	YES
	15001 - 30000 C.F.M.	27	A	YES
	30001 - 50000 C.F.M.	17	A	YES
	50001 - 75000 C.F.M.	3	A	YES
C-3	Coils, Reheat	256	A	YES
F-18	Fire and Smoke Dampers	775	B.A.	YES
F-27	Fans, Centrifugal			
	Up to 5000 C.F.M.	43	A	YES
	Over 5000 to 10000 C.F.M.	10	A	YES
	Over 10000 to 15000 C.F.M.	5	A	YES
	Over 15000 to 20000 C.F.M.	15	A	YES
	Over 20000 to 25000 C.F.M.	9	A	YES
	Over 25000 to 30000 C.F.M.	4	A	YES
	Over 30000 to 35000 C.F.M.	6	A	YES
	Over 35000 to 40000 C.F.M.	12	A	YES
	Over 40000 to 45000 C.F.M.	4	A	YES
	Over 45000 to 50000 C.F.M.	1	A	YES
I-2	Fan Coil Unit, Under Window Type	1461	A	YES
M-3	Motors:			
	1 - 7.5 HP	93	A	YES
	OVER 7.5 HP to 50 HP	162	A	YES
	OVER 50 HP	1	A	YES
P-4	Pump, Centrifugal, 1-25 HP	119	A	YES
S-8	Strainer, Hot Water Y Type	252	A	YES
V-5	Valve	486	A	YES
V-6	Valve, Motor Operated	350	A	YES
	A=ANNUAL S.A.=SEMI-ANNUAL Q=QUARTERLY M=MONTHLY B.A.=BI-ANNUAL After 6:00 pm workdays or on weekends.			

ATTACHMENT 3 PRICING MATRIX FOR FORRESTAL PREVENTIVE MAINTENANCE DE-AB01-03AD04154

Perform maintenance on the following line items per the attached General Services Administration (GSA) preventive maintenance guidelines for each item.

FORRESTAL PREVENTIVE MAINTENANCE ITEMS

PM GUIDE #	ITEM	QTY	FREQUENCY
A-5	Air-Conditioning Machine, CHW Package Unit (Computer Room)		
	10 Tons and Under	39	M
	Over 10 Tons	3	M
A-6S	Air-Conditioning Machine, Package Unit (Comfort Cooling)	21	A
A-9	Air Cooled Condensor-Over 20 Tons	2	Q
A-10	Heat Pumps (10 Tons)	4	A
A-12	Glycol Dry Cooler	1	S.A.
A-13	Module Air-Conditioning, Ceiling/Wall Mounted; Computer Cooling	11	M
C-9	Cooling Tower		
	50 to 500 tons	2	A
C-10	Cooling Tower Cleaning	2	S.A.
R-4	Water Chiller, Special Purpose		
	Under 25 Tons	24	A
	25-50 Tons	4	A
	75-100 Tons	4	A
	A=ANNUAL S.A.=SEMI-ANNUAL Q=QUARTERLY M=MONTHLY		

ATTACHMENT 3 PRICING MATRIX FOR FORRESTAL PREVENTIVE MAINTENANCE
DE-AB01-03AD04154

All contractor services provided under the Blanket Purchase Agreement will have a minimum of 5 years experience in performing maintenance and emergency service on the line items. Maintenance to be performed per the attached General Services Administration (GSA) preventive maintenance guidelines for each item.

ITEM	FFP** Year 1 (7/01/04 -6/30/05)	FFP** Year 2 (7/01/04 -6/30/05)	FFP** Year 3 (7/01/04 -6/30/05)
Air Compressor	$ 119.00	$ 123.00	$ 130.00
Air Handling Unit;			
Under 5000 C.F.M.	$ 167.00	$ 173.00	$ 181.00
5000 - 15000 C.F.M.	$ 214.00	$ 220.00	$ 231.00
15001 - 30000 C.F.M.	$ 262.00	$ 270.00	$ 283.00
30001 - 50000 C.F.M.	$ 309.00	$ 318.00	$ 334.00
50001 - 75000 C.F.M.	$ 380.00	$ 391.00	$ 410.00
Coils, Reheat	$ 49.00	$ 51.00	$ 54.00
Fire and Smoke Dampers	$ 49.00	$ 51.00	$ 54.00
Fans, Centrifugal			
Up to 5000 C.F.M.	$ 147.00	$ 151.00	$ 159.00
Over 5000 to 10000 C.F.M.	$ 147.00	$ 151.00	$ 159.00
Over 10000 to 15000 C.F.M.	$ 172.00	$ 177.00	$ 186.00
Over 15000 to 20000 C.F.M.	$ 172.00	$ 177.00	$ 186.00
Over 20000 to 25000 C.F.M.	$ 172.00	$ 177.00	$ 186.00
Over 25000 to 30000 C.F.M.	$ 172.00	$ 177.00	$ 186.00
Over 30000 to 35000 C.F.M.	$ 196.00	$ 202.00	$ 212.00
Over 35000 to 40000 C.F.M.	$ 196.00	$ 202.00	$ 212.00
Over 40000 to 45000 C.F.M.	$ 294.00	$ 302.00	$ 317.00
Over 45000 to 50000 C.F.M.	$ 294.00	$ 302.00	$ 317.00
Fan Coil Unit, Under Window Type	$ 36.75	$ 37.85	$ 40.00
Motors:			
1 - 7.5 HP	$ 30.00	$ 31.00	$ 32.50
OVER 7.5 HP to 50 HP	$ 35.00	$ 36.00	$ 38.00
OVER 50 HP	$ 50.00	$ 52.00	$ 55.00
Pump, Centrifugal, 1-25 HP	$ 49.00	$ 51.00	$ 54.00
Strainer, Hot Water Y Type	$ 36.75	$ 37.85	$ 40.00
Valve	$ 25.00	$ 26.00	$ 27.00
Valve, Motor Operated	$ 25.00	$ 26.00	$ 27.00

* Work to be performed after 6:00 pm work days or on weekends
** Firm Fixed Price

ATTACHMENT 3 PRICING MATRIX FOR FORRESTAL PREVENTIVE MAINTENANCE
DE-AB01-03AD04154

Provide service representatives with a minimum of 5 years experience in performing maintenance and emergency service on the following line items. Emergency service to be provided within 2 hours of notification. Maintenance to be performed per the attached General Services Administration (GSA) preventive maintenance guidelines for each item.

ITEM	FFP** Year 1 (7/01/04 -6/30/05)	FFP** Year 2 (7/01/04 -6/30/05)	FFP** Year 3 (7/01/04 -6/30/05)
Air-Conditioning Machine, CHW Package Unit (Computer Room)			
10 Tons and Under	$ 165.00	$ 170.00	$ 178.00
Over 10 Tons	$ 165.00	$ 170.00	$ 178.00
Air-Conditioning Machine, Package Unit (Comfort Cooling)	$ 330.00	$ 340.00	$ 357.00
Air Cooled Condenser-Over 20 Tons	$ 275.00	$ 289.00	$ 303.00
Heat Pumps (10 Tons)	$ 440.00	$ 454.00	$ 477.00
Glycol Dry Cooler	$ 330.00	$ 340.00	$ 357.00
Module Air-Conditioning, Ceiling/Wall Mounted; Computer Cooling	$ 192.00	$ 197.75	$ 207.00
Cooling Tower			
50 to 500 tons	$ 640.00	$ 660.00	$ 693.00
Cooling Tower Cleaning	$ 280.00	$ 288.00	$ 302.00
Water Chiller, Special Purpose			
Under 25 Tons	$ 760.00	$ 782.00	$ 821.00
25-50 Tons	$1,200.00	$1,236.00	$1,297.00
75-100 Tons	$1,520.00	$1,565.00	$1,644.00

* Work to be performed after 6:00 pm work days or on weekends
** Firm Fixed Price

ATTACHMENT 4 GENERAL SERVICES ADMINISTRATION PREVENTIVE MAINTENANCE GUIDE DE-AB01-03ME04154.M000

General Services Administration Preventive Maintenance Guide
Effective Date: March, 1993

A-10 Heat Pumps
Frequency: Annual

Special Instructions:

1. Review manufacturer's instructions and the Standard Operating Procedure for "Controlling Hazardous Energy Sources."
2. Deenergize, lockout, and tag electrical circuits.
3. Comply with the latest provisions of the Clean Air Act and Environmental Protection Agency (EPA) regulations as they apply to protection of stratospheric ozone.
4. No intentional venting of refrigerants is permitted. During the servicing, maintenance, and repair of refrigeration equipment, the refrigerant must be recovered.
5. Whenever refrigerant is added or removed from equipment, record the quantities on the appropriate forms.
6. Recover, recycle, or reclaim the refrigerant as appropriate.
7. If disposal of the equipment item is required, follow regulations concerning removal of refrigerants and disposal of the equipment.
8. If materials containing refrigerants are discarded, comply with EPA regulations as applicable.
9. Refrigerant oils to be removed for disposal must be analyzed for hazardous waste and handled accordingly.
10. Closely follow all safety procedures described in the Material Safety Data Sheet (MSDS) for the refrigerant and all labels on refrigerant containers.

Check points:

1. Inspect piping for evidence of leaks and vibration. If leaks are not able to be stopped or corrected, report leak status to supervisor.
2. Inspect all wiring for deterioration, and tighten electrical contacts. Check for corrosion, clean, prime, and paint as necessary.
3. Check mounting bolts and tighten if needed.
4. Check crankcase heater.
5. Check fan for vibration or excessive noise. Lubricate fan and motor if required.
6. Check refrigerant levels, recharge if necessary. Check for leaks if loss of refrigerant is detected, using halide leak detector and soap bubbles. If leaks are not able to be stopped or corrected, report leak status to supervisor. Consult the Material Safety Data Sheets (MSDS) for disposal requirements. Reclaimed and recycled CFCs are exempt from hazardous waste regulations (Consult 40 CFR Part 261).
7. Check temperature drop across condensing coil.
8. Clean air intake and screens; change filters as necessary.
9. Brush or pressure wash coil surfaces. Straighten fins with fin comb.
10. Check that reversing valve is energized in the "heat" mode and deenergized in the "cool" mode. Replace defective valves.
11. Check all electrical connections and fused disconnect switches.
12. Check all controls, indoor and outdoor thermostats, timers, and control delays, especially for units with electric supplemental heaters. Repair or replace as necessary.
13. Check oil if compressor is equipped with a sight glass.
14. Clean up work area.

Recommended Tools, Materials, and Equipment:

1. Tool Group A
2. Lubricants. Consult the MSDS for hazardous ingredients and proper personal protective equipment (PPE).
3. Cleaning materials. Consult the MSDS for hazardous ingredients and proper PPE.
4. Fin comb
5. Vacuum or pressure washer.
6. Self sealing quick disconnect refrigerant hose fittings
7. Refrigerant recovery/recycle unit
8. EPA/DOT approved refrigerant storage tanks.
9. Safety goggles.
10. Gloves.
11. Approved refrigerant.
12. Electronic leak detector.

A-10 Heat Pumps **Frequency: Annual**

General Services Administration Preventive Maintenance Guide
Effective Date: March, 1993

A-11 Air Handler Unit Frequency: Annual

Special Instructions:

1. Schedule shutdown with operating personnel, as needed.
2. Review manufacturer's instructions.
3. Review the Standard Operating Procedure for "Controlling Hazardous Energy Sources."
4. Deenergize, lock out and tag electrical circuit(s).
5. Schedule PM on motor per guide M-3, in conjunction with this guide.

Include the following additional special instructions in cases where the air handler is equipped with a direct expansion cooling coil:

6. Comply with the latest provisions of the Clean Air Act and Environmental Protection Agency (EPA) regulations as they apply to protection of stratospheric ozone.
7. No intentional venting of refrigerants is permitted. During the servicing, maintenance, and repair of refrigeration equipment, the refrigerant must be recovered.
8. Whenever refrigerant is added or removed from equipment, record the quantities on the appropriate forms.
9. Recover, recycle, or reclaim the refrigerant as appropriate.
10. If disposal of the equipment item is required, follow regulations concerning removal of refrigerants and disposal of the equipment.
11. If materials containing refrigerants are discarded, comply with EPA regulations as applicable.
12. Refrigerant oils to be removed for disposal must be analyzed for hazardous waste and handled accordingly.
13. Closely follow all safety procedures described in the Material Safety Data Sheet (MSDS) for the refrigerant and all labels on refrigerant containers.

Check points:

1. Check fan blades for dust buildup and clean if necessary.
2. Check fan blades and moving parts for cracks and excessive wear.
3. Check fan RPM against design specifications.
4. Check bearing collar set screws on fan shaft to make sure they are tight.
5. Check dampers for dirt accumulations, clean as necessary. Check felt, repair or replace as necessary.
6. Check damper actuators and linkage for proper operation. Adjust linkage on dampers if out of alignment.
7. Lubricate mechanical connections of dampers sparingly.
8. Clean coils by brushing, blowing, vacuuming, or pressure washing.
9. Check coils for leaking, tightness of fittings. On direct expansion units, check for refrigerant leaks on all lines, valves, fittings, coils, etc., using a halogen leak detector or similar testing device. If leaks are not able to be stopped or corrected, report leak status to supervisor.
10. Use fin comb to straighten coil fins.
11. Flush and clean condensate pans and drains, remove all rust prepare metal and paint. Consult the Material Safety Data Sheet (MSDS) to ensure that the paint lead level is 0.06% or less. Hose down coils and drain pans and wash with an appropriate EPA approved solution approved solution. Treat condensate pans with an EPA approved biocide.
12. Check belts for wear and cracks, adjust tension or alignment, and replace belts when necessary. Multi-belt drives shall only be replaced with matched sets.

13. Check rigid couplings for alignment on direct drives, and for tightness of assembly. Check flexible couplings for alignment and wear.
14. Before heating season (chilled water coils only): Drain cooling coils; blow down to remove moisture; refill with antifreeze and water solution; drain.
15. Check freezestat for proper temperature setting and operation.
16. Vacuum interior of unit.
17. Lubricate fan shaft bearings while unit is running. Add grease slowly until slight bleeding is noted from the seals. Do not over lubricate. Remove old or excess lubricant.
18. Clean up work area.

Recommended Tools, Materials, and Equipment:

1. Tool Group A
2. Tachometer
3. Grease gun and oiler
4. Pressure washer
5. Vacuum.
6. Fin comb
7. Cleaning tools and materials. Consult the MSDS for hazardous ingredients and proper personal protective equipment (PPE).
8. Safety goggles.
9. Gloves.

A-11 Air Handler Unit Frequency: Annual

General Services Administration Preventive Maintenance Guide
Effective Date: October, 1981

A-12 Glycol Dry Cooler
Frequency:
Comfort - Annual
Special - Semiannual

Application:

These units will be associated with packaged air conditioning units and refrigeration units, or would stand alone when utilized in free cooling.

Special Instructions:

1. Schedule outage with operating personnel.
2. Obtain and review manufacturer's instructions for starter to be tested (including the time current characteristic curve).
3. Review the Standard Operating Procedure for "Controlling Hazardous Energy Sources."
4. Review the Standard Operating Procedure for "Selection, Care, and Use of Respiratory Protection."
5. Deenergize, tag, and lock out circuit.

1. Dry Cooler Check Points:
   a. Remove debris from air screen and clean underneath unit.
   b. Pressure wash coil with coil cleaning solution. Check the Material Safety Data Sheets (MSDS) to ensure that the coil cleaner does not contain hydrofluoric acid or another irritating or hazardous compound.
   c. Straighten fin tubes with fin comb.
   d. Check electrical connections for tightness.
   e. Check mounting for tightness.
   f. Check for corrosion. Clean and treat with rust inhibitor and touch up paint as needed. Consult the MSDS for hazardous ingredients and proper personal protective equipment (PPE).
2. Motors and Fans Check Points:
   a. Inspect pulleys, belts, couplings, etc.; adjust tension and tighten mountings as required. Change badly worn belts. Multi-belt drives should be replaced with matched sets.
   b. Perform required lubrication and remove old or excess lubricant.
c. Clean motor with vacuum or low pressure air (less than 40 psi). Check for obstructions in motor cooling and air flow.
3. Expansion Tank Check Points:
   a. Examine exterior of tank, including fittings, manholes, and handholes for leaks, signs of corrosion. Repair/paint as necessary.
   b. Inspect structural supports and repair or replace damaged insulation or covering.
   c. Clean, test, and inspect sight glasses, valves, fittings, drains, and controls.
   d. Perform hydrostatic test if required.
   e. Check antifreeze level with hydrometer and add glycol base antifreeze as required for protection to minus 40 degrees Fahrenheit.
4. Electrical Controls Check Points:
   a. Visually inspect for broken parts, contact arcing, or any evidence of overheating.
   b. Check motor name plate for current rating and controller manufacturer's recommended heater size. (Heater size shall not be changed without the Regional Design Engineer's approval.)
   c. Check line and load connections and heater mounting screws for tightness.

ATTACHMENT 4 GENERAL SERVICES ADMINISTRATION PREVENTIVE MAINTENANCE GUIDE DE-AB01-03ME04154.M000

Recommended Tools, Materials, and Equipment:

1. Standard tools - basic.
2. Pressure washer
3. Fin comb
4. Paint brush
5. Cleaning materials. Consult the Material Safety Data Sheets (MSDS) for hazardous ingredients and proper personal protective equipment (PPE).
6. Respirator
7. Safety goggles
8. Antifreeze - glycol base
9. Rust inhibitor. Consult the MSDS for hazardous ingredients and proper PPE.
10. Vacuum cleaner
11. Hydrometer (to check antifreeze level)

A-12 Glycol Dry Cooler Frequency:
Comfort - Annual
Special – Semiannual

General Services Administration Preventive Maintenance Guide
Effective Date: March, 1993

A-13 Air Conditioning Unit,
Ceiling/Wall Mounted
Frequency
Special - Monthly
Comfort - Annual

Application:

This guide card applies to ceiling or wall mounted air conditioning units, i.e., mini-mates. The unit may be for comfort or special purpose cooling and can be either air cooled or water cooled. Humidifiers will be operated on those units serving computer space and will be inventoried and serviced under this guide card.

Special Instructions:

1. Schedule outage with operating personnel.
2. Schedule PM on associated equipment in conjunction with this guide, i.e., air cooled condensers, glycol dry coolers, cooling tower, etc.
3. Review manufacturer's instructions and the Standard Operating Procedure for "Controlling Hazardous Energy Sources."
4. Deenergize, lock-out, and tag electric circuits.
5. Comply with the latest provisions of the Clean Air Act and Environmental Protection Agency (EPA) regulations as they apply to protection of stratospheric ozone.
6. No intentional venting of refrigerants is permitted. During the servicing, maintenance, and repair of refrigeration equipment, the refrigerant must be recovered.
7. Whenever refrigerant is added or removed from equipment, record the quantities on the appropriate forms.
8. Recover, recycle, or reclaim the refrigerant as appropriate.
9. If disposal of the equipment item is required, follow regulations concerning removal of refrigerants and disposal of the equipment.
10. If materials containing refrigerants are discarded, comply with EPA regulations as applicable.
11. Refrigerant oils to be removed for disposal must be analyzed for hazardous waste and handled accordingly.
12. Closely follow all safety procedures described in the Material Safety Data Sheet (MSDS) for the refrigerant and all labels on refrigerant containers.

Check Points:

1. Thoroughly inspect and clean interior and exterior of machine with vacuum (remove panels).
2. Clean drain pan and note excessive corrosion. Correct as necessary.
3. Check for refrigerant leaks using a halogen leak detector, soap bubbles, or similar testing device. If leaks are not able to be stopped or corrected, report leak status to supervisor. Consult the Material Safety Data Sheets (MSDS) for disposal requirements. Reclaimed and recycled CFCs are exempt from hazardous waste regulations (Consult 40 CFR Part 261).
4. Check refrigerant levels and recharge if necessary.
5. Check condition of cooling and reheat coils. Use fin comb as needed.
6. Clean coils using detergent solution and warm water if coil is heavily soiled.
7. Drain and clean humidifier pan or pad, whichever applies. Replace pad if required. Remove corrosion, prime, and paint as needed.

8. Lubricate motor and fan bearings, if not sealed. Check alignment of motor and fan. Clean all fans or blowers.
9. Check belt tension and condition. Adjust or replace as required if belt driven.
10. On direct drive units, check set screws on fan shaft to make sure they are tight.
11. Replace filters as needed.
12. Check compressor oil level (not on hermetically sealed units) if compressor is equipped with a sight glass.
13. Run machine. Check action of controls, relays, switches, including fused disconnect type, etc., to see that:
    a. compressor(s) run at proper setting.
    b. reheat coils activate properly (if applicable).
    c. humidistat activates humidifier (if applicable).
    d. suction and discharge pressures are proper.
    e. discharge temperature is set properly.
    f. Clean up work area.

Recommended Tools, Materials, and Equipment:

1. Tool Group A.
2. Cleaning tools and materials.
3. Vacuum.
4. Fin comb.
5. Grease gun and oiler.
6. Ladder constructed according to OSHA/ANSI standards - ceiling mounted units. Check ladder for defects. Do not use defective ladders.
7. Self sealing quick disconnect refrigerant hose fittings.
8. Refrigerant recovery/recycle unit.
9. EPA/DOT approved refrigerant storage tanks.
10. Safety goggles.
11. Gloves.
12. Approved refrigerant.
13. Electronic leak detector.

A-13 Air Conditioning Unit, Ceiling/Wall Mounted
Frequency
Comfort – Annual
Special – Monthly

General Services Administration Preventive Maintenance Guide
Effective Date: January, 1995

A-4 Air Compressor Frequency: Semiannual

Special Instructions:

1. Review manufacturer's instructions and equipment history record.
2. Coordinate motor PM on an annual basis. See Guide M-3.
3. Tank should be inspected and tested by qualified inspector.
4. De-energize, tag, and lock out circuits. Review the Standard Operating Guide on "Controlling Hazardous Energy Sources".

Check points:

1. Perform normal tour checks and operations. Perform a visual inspection of the air system, noting any obvious leaks or portions of the air distribution network that may be subject to physical damage.
2. Change compressor crankcase oil.
3. Clean or replace air intake filter.
4. Check air dryer, automatic condensate drains, and air tank for proper operation. Clean condenser coils and cover grills.
5. Inspect belt alignment and condition. Adjust or replace belts as required.
6. Check for corrosion and scale on water cooled units.
7. Clean heat exchange surfaces.
8. Check accuracy of gauges with calibrated test gauge.
9. On two stage compressor, check intermediate pressure.
10. Test relief valves, replace if leaking or the relief range is incorrect. Do not readjust safety relief valves in the field.
11. Check operation of compressor unloaders, repair or replace if not loading and unloading properly.
12. Check compressor suction and discharge valves for proper operation. Replace leaking valves.
13. Check cut in and cut out of compressor pressure controller, readjust if necessary for proper air pressure requirements. Do not exceed ASME maximum tank pressure.
14. Check to make sure belt guard is installed prior to putting air compressor back in service.
15. No pressure vessel is to have its hand hole or man hole covers removed unless the vessel is at atmospheric pressure.
16. Check if air compressor is running excessively or frequently cycling on and off (possible leaks). Log hour meter readings.
17. Perform an air leak check of the compressor and air distribution network in the equipment room, using an appropriate ultrasonic scanning device. Check hoses, hose connections, hose fittings, quick couplers, filters, regulators and lubricators. Correct or schedule repair as a work item. Tag location and date of leaks.

Recommended Tools, Materials, and Equipment:

1. Standard Tools - Basic
2. Belts
3. Lubricants. Consult the Material Safety Data Sheets (MSDS) for hazardous ingredients and proper personal protective equipment (PPE).
4. Fin comb
5. Vacuum cleaner commercial type
6. Test gauge
7. Ultrasonic scanner with trisonic and contact scanning modes.

A-4 Air Compressor
Frequency: Semiannual

General Services Administration Preventive Maintenance Guide
Revised Date- July, 1996

A-5 Air Conditioning Machine:
Split System Chilled Watter Coils
Frequency
Comfort - Annual
Special - Monthly
Application-

This guide card applies to those packaged type air conditioning machines that are floor mounted and equipped with chilled water coils. The other portion of the split system is a packaged type chilled water unit (PM Guide R-4), is to be serviced in conjunction with this PM activity.

Special In.structions-

1. Review manufacturer's instructions.
2. A/C machine maintenance should be scheduled to coincide with package chiller maintenance as noted above.
3. Comply with the latest provisions of the Clean Air Act and Environmental Protection Agency (EPA) regulations as they apply to protection of stratospheric ozone.

Check Points-.

1. Thoroughly inspect and clean interior and exterior of machine with vacuum (remove panels).
2. Clean drain pan and note excessive corrosion. Treat rusted areas with rust inhibitor. Ensure that the rust inhibitor chemical does not add volatile organic compounds or contaminants to the drain pan. If possible, rinse well after application or choose a less hazardous material. Consult the chemicals Material Safety Data Sheet (MSDS) for this information.
3. Perform checks according to the type of unit.
    1). Check for chilled water leaks on all lines, valves, strainers, coils, etc. If leaks are not able to be stopped or corrected, report leak status to supervisor.
    2). Clean chilled water strainer.
4. Check condition of cooling and reheat coils. Use fin comb if need to straighten fins.
5. Clean coils. Use detergent solution and warm water if coil is heavily soiled.
6. Drain and clean humidifier pan or pad, whichever applies. Replace pad if required. Remove corrosion as needed.
7. Clean and lubricate motor and squirrel cage fan(s). Check alignment of motor and fan. Check bearings for excessive wear.
8. Check belt tension and condition. Adjust or replace as required.
9. Replace pre-filters.
10. Replacefinalfilter.
11. Run machine, check action of controls, relays, switches, etc., to see that:
    1). Chilled water valve(s) are operating properly.
    2). Reheat coils activate properly.
    3). Humidistat activates humidifier.
    4). Valves regulating water pressure are operating properly.
    5). Discharge air temperature is set properly.
    6). Check and record chilled water inlet and outlet temperatures.
12. Check and adjust vibration eliminator mountings if equipped. Repair or replace if required.

Recommended Tools, Materials, and Equipment-

1. Tool Group A.
2. Cleaning tools, grease gun, oil and materials. Consult the MSDS for hazardous ingredients and proper personal protective equipment (PPE).
3. Vacuum
4. Fin comb
5. Filters
6. Spare V-belts
7. Safety goggles
8. Gloves

A-5 Air Conditioning Machine:
Split System Chilled Watter Coils
Frequency:
Comfort - Annual
Special - Monthly

General Services Administration Preventive Maintenance Guide
Effective Date: March, 1993

A-6 Air-Conditioning Machine
Package Unit (Comfort Cooling)
Frequency: Annual

Application:

This PM guide applies to units that may have the evaporator, compressor, fan unit components, and condenser within a single housing or may have the condenser separate from the housing. If the condenser is separate, perform the PM on the condensing unit using PM Guide A-9 at the same time.

Special Instructions:

1. Review manufacturer's instructions.
2. Deenergize, lockout, and tag the electrical circuits.
3. Comply with the latest provisions of the Clean Air Act and Environmental Protection Agency (EPA) regulations as they apply to protection of stratospheric ozone.
4. No intentional venting of refrigerants is permitted. During the servicing, maintenance, and repair of refrigeration equipment, the refrigerant must be recovered.
5. Whenever refrigerant is added or removed from equipment, record the quantities on the appropriate forms.
6. Recover, recycle, or reclaim the refrigerant as appropriate.
7. If disposal of the equipment item is required, follow regulations concerning removal of refrigerants and disposal of the appliance.
8. If materials containing refrigerants are discarded, comply with EPA regulations as applicable.
9. Refrigerant oils to be removed for disposal must be analyzed for hazardous waste and handled accordingly.
10. Closely follow all safety procedures described in the Material Safety Data Sheet (MSDS) for the refrigerant and all labels on refrigerant containers.

Check points:

1. Thoroughly inspect and clean interior and exterior of machine with vacuum cleaner, (remove panels).
2. Clean drain pan and note excessive corrosion, prepare metal and paint as necessary. Consult the Material Safety Data Sheet (MSDS) to ensure that the paint lead level is 0.06% or less.
3. Check for refrigerant leaks using a halogen detector or similar testing device. Repair all leaks before recharging unit. If leaks are not able to be stopped or corrected, report leak status to supervisor. Consult the MSDS for disposal requirements. Reclaimed and recycled CFCs are exempt from hazardous waste regulations (Consult 40 CFR Part 261).
4. Check refrigerant levels for proper charge and recharge as needed.
5. Check condition of cooling and reheat coils. Use fin comb if needed to straighten fins.
6. Clean coils, use coil cleaner detergent solution and high pressure water.
7. Check belts for wear, adjust tension or alignment, and replace when necessary.
8. Drain and clean humidifier drip pan, if applicable. Remove corrosion; prime, and paint as needed.
9. Lubricate motor and fan bearings, if not sealed. Check alignment of motor and fan.
10. Replace prefilters if needed.
11. Replace final filters if needed.
12. Check compressor oil level, if compressor has an oil sight glass.
13. Run machine, check action of controls, relays, switches, etc., to see that:

a. compressor(s) run at proper settings.
b. reheat coils activate properly.
c. humidistat activates humidifier.
d. suction and discharge pressures are proper.
e. discharge air pressure is set properly.

14. check and tighten any loose unit electrical terminals, disconnect switches, or connectors.
15. Check and adjust vibration eliminators. Replace if required.
16. Remove all trash or debris from work area. Consult the MSDS for proper personal protective equipment (PPE).

Recommended Tools, Materials, and Equipment:

1. Tool Group A
2. Cleaning tools and materials, vacuum wet/dry, fin comb, grease gun and oil, filters and prefilters, spare belts.
3. Approved refrigerant.
4. Paint and brushes as required. Consult the MSDS to ensure that the paint lead level is 0.06% or less.
5. Self sealing quick disconnect refrigerant hose fittings
6. Refrigerant recovery/recycle unit
7. EPA/DOT approved refrigerant storage tanks.
8. Safety goggles.
9. Gloves.
10. Electronic leak detector.

A-6 Air-Conditioning Machine, Package Unit (Comfort Cooling)
Frequency: Annual

ATTACHMENT 4 GENERAL SERVICES ADMINISTRATION PREVENTIVE MAINTENANCE GUIDE DE-AB01-03ME04154.M000

General Services Administration Preventive Maintenance Guide
Effective Date: March, 1993

A-9 Air-Cooled Condenser
Frequency: Annual

Application:

This PM guide applies to equipment which has the condenser, fan(s), and fan motor(s) enclosed within the same housing. The compressor and other components are at a separate location. PM of these other devices should be scheduled simultaneously with the units serviced by the condenser. If the condenser motor(s) is/are rated at 1 HP or higher, schedule PM of motor(s) with this PM.

Special Instructions:

1. Review manufacturer's instructions.
2. Review the Standard Operating Procedure for "Controlling Hazardous Energy Sources."
3. Review the Standard Operating Procedure for "Selection, Care, and Use of Respiratory Protection".
4. Deenergize, lock out, and tag electrical circuit breaker.
5. Comply with the latest provisions of the Clean Air Act and Environmental Protection Agency (EPA) regulations as they apply to protection of stratospheric ozone.
6. No intentional venting of refrigerants is permitted. During the servicing, maintenance, and repair of refrigeration equipment, the refrigerant must be recovered.
7. Whenever refrigerant is added or removed from equipment, record the quantities on the appropriate forms.
8. Recover, recycle, or reclaim the refrigerant as appropriate.
9. If disposal of the equipment item is required, follow regulations concerning removal of refrigerants and disposal of the equipment.
10. If materials containing refrigerants are discarded, comply with EPA regulations as applicable.
11. Refrigerant oils to be removed for disposal must be analyzed for hazardous waste and handled accordingly.
12. Closely follow all safety procedures described in the Material Safety Data Sheet (MSDS) for the refrigerant and all labels on refrigerant containers.

Check points:

1. Remove debris from air screen and clean underneath unit.
2. Pressure wash coil with coil cleaning solution.
3. Straighten fin tubes with fin comb.
4. Check electrical connections for tightness.
5. Check mounting for tightness.
6. Check for and remove all corrosion or rust from unit and supporting steel, prime and paint as necessary. Consult the Material Safety Data Sheet (MSDS) to ensure that the paint lead level is 0.06% or less. Consult the MSDS for proper personal protective equipment (PPE).
7. Check fan blades and belts. Clean fan blades as necessary.
8. Check wires at condenser electrical fused safety switches for tightness and burned insulation. Repair as necessary.
9. Clean up work area.

Recommended Tools, Materials, and Equipment:

1. Standard Tools - Basic

2. High pressure washer
3. Fin comb
4. Paint brushes
5. Cleaning materials. Consult the MSDS for hazardous ingredients and proper PPE.
6. Respirator
7. Safety goggles
8. Gloves.
9. Self sealing quick disconnect refrigerant hose fittings
10. Refrigerant recovery/recycle unit
11. EPA/DOT approved refrigerant storage tanks.

A-9 Air-Cooled Condenser
Frequency: Annual

ATTACHMENT 4 GENERAL SERVICES ADMINISTRATION PREVENTIVE MAINTENANCE GUIDE DE-AB01-03ME04154.M000

General Services Administration Preventive Maintenance Guide
Effective Date: March, 1993

C-10 Cooling Tower, Cleaning
Frequency: Quarterly

Application:

This applies to all cooling towers and evaporative condensers. Those located on the mezzanine or lower levels and near fresh air intakes are particularly important.

Special Instructions:

1. Perform work before seasonal start-up (unless system has remained clean and free of biodeposits), before seasonal shutdown, and quarterly during the cooling season.
2. Review the Standard Operating Procedure for "Controlling Hazardous Energy Sources."
3. Review manufacturer's instructions.
4. Deenergize, tag, and lock electrical circuits.
5. Review the Standard Operating Procedure for "Selection, Care, and Use of Respiratory Protection".
6. Ensure that there are safe and sturdy ladders and platforms to perform the lifting and cleaning required.
7. If biological growth is excessive, have a qualified water treatment specialist review your treatment program.
8. Refer to Table A for information on chlorine use.
9. If materials to be worked on, such as the wet deck panels, are known or suspected to contain asbestos, check the building's asbestos management plan to see if they have been tested for asbestos. If they are suspect but have not been tested, have them tested. Manage asbestos in accordance with the plan.

Check Points:

1. Close building air intake vents within the vicinity of the cooling tower until the cleaning procedure is complete.
2. Shut down, drain, and flush the cooling tower with water (check with state to determine if there are any restrictions on discharging the water). Isolate the cooling tower from the rest of the condenser water system where applicable.
3. Clean the wet deck, remove all debris, and dispose of properly. If the wet deck panels contains asbestos, follow the asbestos management plan for isolation, notification, work practice, and waste disposal.
4. Inspect the tower, the tower basin and holding tank for sediment and sludge, and any biological growth.
5. Using low pressure water hose or brushes, clean the tower, floor, sump, fill, spray pans and nozzles and removable components such as access hatches, ball float, and other fittings until all surfaces are clean and free of loose material. Porous surfaces such as wooden and ceramic tile towers will require additional cleaning and brushing. Clean cracks and crevices where buildup is not reached by water treatment.
6. Clean all system strainers and strainer housings.
7. Remove drift eliminators and clean thoroughly using a hose, steam, or chemical cleanser.
8. Check fan and air inlet screens and remove any dirt or debris.
9. Reassemble components, and fill tower and cooling system with water.
10. Monitor the water pH and maintain pH within a range of 7.5 to 8.0. The pH can be monitored with litmus paper or a pH meter.

Perform the following if a more thorough disinfectant cleaning is needed;

1. Add a silicate-based low or non-foaming detergent as a dispersant at a dosage of 10-25 pounds per thousand gallons of water in the system.
   a. Use a silicate-based low or non-foaming detergent such as Cascade®, Calgonite®, or equivalent product. (Trade names mentioned do not imply endorsement by the government).
   b. If the total volume of water in the system is not known, it can be estimated to be ten (10) times the recirculating rate (gallons per minute) or 30 gallons per ton of refrigeration capacity.
   c. The dispersant is best added by first dissolving it in water and adding the solution to a turbulent zone in the water system, such as the cooling tower basin near the pump suction.
   d. Contact a professional water treatment specialist for a dispersant which may be safely used without interfering with the operation of the system.
2. Add chlorine disinfectant to achieve 25 parts per million (ppm) of free residual chlorine.
   a. Maintain 10 ppm of free residual chlorine in water returning to the cooling tower for 24 hours.
   b. A swimming pool test kit may be used to monitor the chlorine. Follow the manufacturer's instructions. Test papers such as those used to monitor restaurant sanitizing tanks may also be used.
   c. Monitor every 15 minutes for two hours to maintain the 10 ppm level. Add chlorine as needed to maintain this level.
   d. Two hours after the slug dose or after three measurements are stable at 10 ppm of free residual chlorine, monitor at two hour intervals to maintain the 10 ppm of free residual chlorine.
   e. Some kits cannot measure 10 ppm. In this case dilute the test sample with distilled water to bring it within the test set range.
3. After 24 hours, drain the system (check with state to determine if there are any restrictions on discharging the water).
4. Adjust bleed, float, central valve for desired water level.
5. Open any building air vents that were closed prior to the cleaning of the cooling tower.
6. Implement an effective routine treatment program for microbial control.
7. Document all maintenance and cleaning procedures by date and time. Record the brand name and the volume or weight of chemicals used.

Recommended Tools, Materials, and Equipment:

1. Tool Group C.
2. Pressure washer with hose and nozzle.
3. Cleaning tools and materials. Consult the Material Safety Data Sheets (MSDS) for hazardous ingredients and proper personal protective equipment (PPE).
4. Appropriate chemicals and detergents (see guide card for details). Consult the Material Safety Data Sheets (MSDS) for hazardous ingredients and proper personal protective equipment (PPE).
5. Respirator with acid/gas/mist/HEPA filters. For other chemicals, refer to the Material Safety Data Sheet (MSDS) for recommended respirator).
6. Safety goggles.
7. Waterproof clothing (while working inside a wet tower).
8. Gloves (refer to MSDS on chemicals used for the type of gloves required).
9. Rubber boots if wet.
10. Litmus paper or pH meter.
11. Swimming pool test kit.

TABLE OF VALUES

Chlorine Compounds	Percent Available Chlorine	Weight per 1000 gallons
Hypochlorites		
Calcium, $Ca(OCl)_2$ (HTH)	70	0.3 lb.
Sodium, NaOCl		
Industrial grade	12-15	1.5 lb.
Domestic grade (bleach)	3-5	5.25 lb.
Potassium or sodium chlorinated isocyanurates	55-65	0.4 - 0.33 lb.
	66-90	0.33 - 0.25 lb.

* Only those compounds commonly available in most communities are listed. Other appropriate compounds may be suggested by a water treatment specialist.

** These weights are approximate and are calculated to attain a free chlorine level of 25 ppm in a theoretical cooling tower system with no biodeposits. If biodeposits are present, additional chlorine will be required. Calculate the volume of the entire cooling tower system, including the cooling tower water and the recirculating water; it should be several times more than the holding capacity of the tower.

*** Select only fast-release compounds, which are available in pellets, granular or extra granular forms in the 55-65% available chlorine category. Compounds with higher percentages of available chlorines (66-90%) release more slowly; use only the granular or extra granular forms.

C-10 Cooling Tower, Cleaning
Frequency: Quarterly

General Services Administration Preventive Maintenance Guide
Effective Date: October, 1981

C-3 Coils Preheat, Reheat, Etc.
Frequency: Annual
(Remote Locations)

Application:

This guide applies to coils that are not part of an air washer or air handling unit.

Special Instructions.

Review the Standard Operating Procedure for "Selection, Care, and Use of Respiratory Protection."

Check points:

1. Vacuum or blow out the fins, coils, etc.
2. Remove obstructions to air flow.
3. Check coils. Correct or report any leaks.
4. Test and inspect controls that protects coils against freezing.
5. Check for rust or corrosion around coil frame and coil mounting bracket. Clean, prepare for painting and coat with proper type paint as necessary.

Recommended Tools, Materials, and Equipment:

1. Standard Tools - Basic
2. Vacuum Cleaner wet/dry
3. Radiator brush
4. Coil cleaner. Consult the Material Safety Data Sheets (MSDS) for hazardous ingredients and proper personal protective equipment (PPE).
5. Respirator
6. Safety goggles
7. Materials to properly prepare and paint metal. Consult the MSDS to ensure that the paint lead level is 0.06% or less.

C-3 Coils Preheat, Reheat, Etc.
Frequency: Annual
(Remote Locations)

ATTACHMENT 4 GENERAL SERVICES ADMINISTRATION PREVENTIVE MAINTENANCE GUIDE DE-AB01-03ME04154.M000

General Services Administration Preventive Maintenance Guide
Effective Date: March, 1993

C-9 Cooling Tower, Maintenance
Frequency: Annual

Special Instructions:

1. Schedule performance of this PM activity prior to seasonal start-up. Consider the time needed to effect any required repairs.
2. Review the Standard Operating Procedure for "Controlling Hazardous Energy Sources."
3. Perform cleaning of the tower in accordance with PM guide
C-10 before performing this PM activity.
4. Review manufacturer's instructions.
5. Deenergize, lock out, and tag electrical circuits.
6. Review the Standard Operating Procedure for "Selection, Care, and Use of Respiratory Protection".
7. Properly dispose of any debris, excess oil, and grease.
8. If materials to be worked on, such as the wet deck panels, are known or suspected to contain asbestos, check the building's asbestos management plan to see if they have been tested for asbestos. If they are suspect but have not been tested, have them tested. Manage asbestos in accordance with the plan.

Check Points:

1. Exterior Structural:
   a. Inspect louvers for correct position and alignment, missing or defective items, and supports.
   b. Inspect casings and attaching hardware for leaks or defects. Check the integrity and secure attachrnent of the corner rolls.
   c. Inspect for loose or rotten boards on wood casings. Examine from the interior. Extensive damage may require replacement with fiberglass sheathing.
   d. Inspect condition of access doors and hinges. Repair as necessary.
   e. Inspect the distribution system including flange connectors and gaskets, caulking of headers on counterflow towers, deterioration in distribution basins, splash guards, and associated piping on crossflow towers. If configured with water troughs check boards for warpage, splitting, and gaps.
   f. Examine the drain boards for damage and proper drainage. Check the fasteners also.
   g. Inspect stairways including handrails, knee rails, stringers, structure and fasteners for rot, corrosion, security and acid attack.
   h. Shake ladders to verify security, and check all rungs.
   i. Check the security, rot, and corrosion on walkway treads. Check treads, walkways, and platforms for loose, broken, or missing parts. Tighten or replace as necessary.
   j. Ladders must be checked for corrosion, rot, etc. Verify compliance with Occupational Safety and Health regulations regarding height requirements. Check ladder security.
   k. Check fan decks and supports for decay, missing and broken
   parts, and gaps. Check the security.
   l. Fan cylinders must be securely anchored. Check fastening devices. Note any damaged, missing, or corroded items. Watch for wood rot and corrosion of steel. Verify proper tip clearance between the fan blade and interior of cylinder. Verify compliance with OSHA requirements regarding height. Check its condition.
   m. Apply protective coatings as needed on exterior surfaces. Be sure rust and dirt have been removed first.
2. Interior Structural:

a. Inspect the distribution system piping for decay, rust, or acid attack. Check the condition and tightness of connections and branch arms. Observe spray pattern of nozzles if possible and note missing and defective nozzles. Note condition of the redistribution system under the hot water system.

b. Inspect mechanical equipment supports and fasteners for corrosion. Wood structural members in contact with steel should be checked for evidence of weakness. Check condition of springs or rubber vibration absorption pads, including adjusting bolts, ferrous members, and rubber pads.

c. Check valves and operating condition of fire detection system. Check for corrosion of pipes and connectors. Check wiring of any thermocouple installed.

d. Check drift eliminators and supports. Remove any clogging debris. Replace missing blades.

e. Inspect tower fill for damage, ice breakage, deterioration, and misplaced, missing, or defective splash bars.

f. Examine interior structural supports. Test columns, girts, and diagonal wood members for soundness by striking with a hammer. A high pitched, sharp sound indicates good wood, whereas a dull sound indicates soft wood. Probe rotted areas with a screw driver to determine extent of rot. Look for iron rot of metal fasteners in contact with wood. Check condition of steel internals. Check condition and tightness of bolts.

g. Inspect the nuts and bolts in partitions for tightness and corrosion. Look for loose or deteriorated partition boards. Note if partitions are installed so as to prevent wind milling of idle fans. Make sure wind walls parallel to intake louvers are in position. Boards or transite members should be securely fastened. Check condition of wood or steel supports for rot and corrosion.

h. Check wooden cold water basins for deterioration, warps, splits, open joints, and sound of wood. Inspect steel basins for corrosion and general condition. Inspect concrete basins for cracks, breaking joints, and acid attack.

i. Check all sumps for debris, condition of screens, antiturbular plates, and freely operating drain valves.

3. Mechanical:

a. Check alignment of gear, motor, and fan.

b. Inspect fans and air inlet screens and remove any dirt or debris.

1). Check hubs and hub covers for corrosion, and condition of attaching hardware.

2). Inspect blade clamping arrangement for tightness and corrosion.

c. Gear box

1). Clean out any sludge.

2). Change oil. Be sure gear box is full to avoid condensation.

3). Rotate input shaft manually back and forth to check for backlash.

4). Attempt to move the shaft radially to check for wear on the input pinion shaft bearing.

5). Look for excessive play of the fan shaft bearings by applying a force up and down on the tip of a fan blade. Note: Some output shafts have a running clearance built into them.

d. Power transmission.

1). Check that the drive shaft and coupling guards are installed and that there are no signs of rubbing. Inspect the keys and set screws on the drive shaft, and check the connecting hardware for tightness. Tighten or install as required.

2). Look for corrosion, wear, or missing elements on the drive shaft couplings.

3). Examine the exterior of the drive shaft for corrosion, and check the interior by tapping and listening for dead spots.

4). Observe flexible connectors of both ends of the shaft.

5). Inspect bearings, belts, and pulleys for excessive noise, wear or cracking, alignment, vibration, looseness, surface glazing, tension. Replace or repair as required.

e. Check water distribution. Adjust water level and flush out troughs if necessary. Check all piping, connections, and brackets for looseness. Tighten loose connections and mounting brackets. Replace bolts and braces as required.

f. Check nozzles for clogging and proper distribution.

g. Inspect keys and keyways in motor and drive shaft.

4. Electrical:
   a. Check electric motor for excessive heat and vibration. Lubricate all motor bearings as applicable. Remove excess lubricant.
   b. Inspect fused disconnect switches, wiring, conduit, and electrical controls for loose connections, charred or broken insulation, or other defects. Tighten, repair, or replace as required.
   c. Remove dust from air intakes, and check for corrosion. Check TEFC motors for conditions of air passages and fans.
   d. If there is a drain moisture plug installed, see if it is operational.
   e. Check amps and volts at operating loads, recommend pitching of fan blades to compensate.
   f. Look for corrosion and security of mounting bolts and attachments.

Recommended Tools, Materials, and Equipment:

1. Tool Group C
2. Protective coating, brushes, solvent, etc. Consult the Material Safety Data Sheets (MSDS) for hazardous ingredients and proper personal protective equipment (PPE).
3. Manufacturer approved lubricants. Consult the MSDS for hazardous ingredients and proper PPE.
5. Cleaning tools and materials. Consult the MSDS for hazardous ingredients and proper PPE.
6. Respirator.
7. Safety goggles
8. Work gloves
9. Ladders of appropriate size constructed according to OSHA/ANSI standards or scaffolding. Check ladder for defects. Do not use defective ladders.
10. Amp probe and volt meter.
11. High pressure washer.

C-9 Cooling Tower, Maintenance
Frequency: Annual

General Services Administration Preventive Maintenance Guide
Effective Date: January, 1995

F-18 Fire and Smoke Dampers
Frequency: Two Years

Application:

This guide applies to all fire and smoke dampers in HVAC systems.

Special Instructions:

1. Verify that dampers are not installed backwards. Air movement should always tend to close the damper.
2. Verify that dampers are not held open by the air stream.
3. NEVER replace the fusible link with a piece of wire.

Check Points:

1. Make sure the access door is reasonably air tight and latches properly.
2. If the damper is closed, check for a ruptured fusible link, broken attachment or hinges, corrosion, or damage.
3. Remove the fusible link and operate the damper to verify that it is self-closing and fully closes and latches. Operate damper with normal system airflow to assure that they are not held open by the air stream.
4. Verify that the damper is not rusted or blocked. Check hinges and other moving parts. Lubricate moving parts. Adjust the damper as required.
5. Check the temperature rating of the fusible link. The fusible links shall have a temperature rating approximately 50°F above the maximum temperature that normally is encountered when the system is in operation or shut down, but not less than 160°F. Where fire dampers are within air ducts which are part of an engineered smoke control system, fusible links shall have a temperature rating approximately 50°F above the operating temperature for which the smoke control system is designed, but not to exceed 286°F.
6. Check operation of the motorized damper control. Lubricate friction points and exercise the damper to ensure complete freedom of movement. Remove old or excess lubricant.
7. Install new fusible link of proper rating and tensile strength in areas of vibration.
8. Reinstall fusible link where vibration is not a problem.
9. Close the access door and check for air noise or leakage.

Recommended Tools, Materials, and Equipment:

1. Standard Tools - Basic
2. Lubricants - Consult the Material Safety Data Sheets (MSDS) for hazardous ingredients and proper personal protective equipment (PPE).

F-18 Fire and Smoke Dampers

ATTACHMENT 4 GENERAL SERVICES ADMINISTRATION PREVENTIVE MAINTENANCE GUIDE
DE-AB01-03ME04154.M000

General Services Administration Preventive Maintenance Guide
Effective Date: October, 1981

I-2 Fan Coil Units, Under Window Type
Frequency: Annual

Special Instructions.

1. Review the Standard Operating Procedure for "Selection, Care, and Use of Respiratory Protection".
2. If materials to be worked on are known or suspected to contain asbestos, check the building's asbestos management plan to see if they have been tested for asbestos. If they are suspect but have not been tested, have them tested. Manage asbestos in accordance with the plan.

Check points:

1. Check unit for noise and vibration.
2. Check V-belt condition and tension. Adjust if needed, or replace.
3. Clean and wash permanent filters. Recharge wire mesh filters with oil.
4. Replace disposal filters.
5. Drain and clean condensate pan.
6. Lubricate fan shaft bearings (if not sealed).
7. Lubricate motor bearings sparingly using SAE 10W motor oil (if not sealed).
8. Clean coils by vacuuming or brushing.
9. Use fin comb to straighten coil fins.
10. Clean strainers for accumulation of dirt.
11. Check controls, trap, freeze-stat, and control-stat for proper operation.
12. Clean fan blades and interior unit surfaces to remove soil.
13. Damp wipe exterior surfaces.
14. Clean surrounding floor area, and remove any dirt and debris from work area.

Recommended Tools, Materials, and Equipment:

1. Tool Group A
2. Cleaning materials and equipment. Consult the Material Safety Data Sheets (MSDS) for hazardous ingredients and proper personal protective equipment (PPE).
3. Fin comb
4. Oiler
5. Filters
6. Belts
7. Vacuum
8. Respirator
9. Goggles

I-2 Fan Coil Units, Under Window Type
Frequency: Annual

General Services Administration Preventive Maintenance Guide
Effective Date: January, 1995

F-27 Fan, Centrifugal
Frequency: Annual

Special Instructions:

1. Review manufacturer's instructions.
2. Schedule shut-downs with operating personnel, as needed.
3. Review the Standard Operating Procedure for "Controlling Hazardous Energy Sources."
4. Review the Standard Operating Procedure for "Selection, Care and Use of Respiratory Equipment."
5. Deenergize, lock out and tag fan motor electrical circuit.
6. Refer to appropriate guide cards and manufacturer's instructions for motor maintenance.

Check points:

1. Check fan blades for dust buildup and clean if necessary.
2. Check fan blades and moving parts excessive wear. Clean as needed.
3. Check fan RPM to design specifications.
4. Check bearing collar set screws on fan shaft to make sure they are tight.
5. Vacuum interior of unit if accessible. Clean exterior.
6. Lubricate fan shaft bearings while unit is running. Add grease slowly until slight bleeding is noted from the seals. Do not over lubricate. Remove old or excess lubricant.
7. Check belts for wear, adjust tension or alignment, and replace belts when necessary. Multiple belts should be replaced with matched sets.
8. Check structural members, vibration eliminators, and flexible connections.
9. Remove all trash and clean area around fan and fan room.

Recommended Tools, Materials, and Equipment:

1. Standard Tools - Basic
2. Tachometer
3. Cleaning equipment and materials - Consult the Material Safety Data Sheets (MSDS) for hazardous ingredients and proper personal protective equipment (PPE).
4. Vacuum
5. Grease guns, lubricants - Consult the MSDS for hazardous ingredients and proper PPE.
6. Respirator

F-27 Fan, Centrifugal
Frequency: Annual

ATTACHMENT 4 GENERAL SERVICES ADMINISTRATION PREVENTIVE MAINTENANCE GUIDE DE-AB01-03ME04154.M000

General Services Administration Preventive Maintenance Guide
Effective Date: January, 1995

M-3 Motors, Preventive Maintenance
Frequency: Annual

Application:

This guide is for induction, wound-rotor and synchronous motors in excess of 1 horsepower. The maintenance specified by this guide is not intended to require disassembly of the motor. This guide does not normally apply to motors rated less than 1 horsepower, for which maintenance is normally limited to cleaning and lubrication, and is done with the maintenance of the driven machine.

Special Instructions:

1. Notify and schedule shut-down with operating personnel.
2. Review manufacturer's instructions.
3. Review the Standard Operating Procedure for "Controlling Hazardous Energy Sources".
4. De energize, tag, and lock circuit serving motor, when applicable.
5. Refer to the latest editions of the American National Standards Institute/National Fire Protection Association (ANSI/NFPA) publication 70B, "Electrical Equipment Maintenance" and the InterNational Electrical Testing Association publication, "Maintenance Testing Specifications", as applicable.

Check points:

1. Check ventilation ports for soil accumulation, clean if necessary.
2. Clean exterior of motor surfaces of soil accumulation.
3. Lubricate bearings according to horsepower ratings:
   a. Remove filler and drain plugs (use zerk fittings in place of filler plug if not installed).
   b. Free drain hole of any hard grease (use piece of wire if necessary).
   c. Add grease - use good grade lithium base grease unless otherwise noted.
   d Run motor at operating temperature for 15 minutes, wipe off excess grease at drain hole and reinstall drain plug.
4. Check motor windings for accumulation of soil. Vacuum with long bottle type brush then blow out with dry air if required, air pressure must not exceed 30 psig.
5. Check hold down bolts and grounding straps for tightness.
6. Replace worn or broken ground straps.
7. Check slip with tachometer.

Recommended Tools, Materials, and Equipment:

1. Tool Group B
2. Tachometer
3. Cleaning equipment and materials. Consult the Material Safety Data Sheets (MSDS) for hazardous ingredients and proper personal protective equipment (PPE).
4. Lubricants. Consult the MSDS for hazardous ingredients and proper PPE.
5. Vacuum with long bottle type brush attachment.

M-3 Motors, Preventive Maintenance
Frequency: Annual

ATTACHMENT 4 GENERAL SERVICES ADMINISTRATION PREVENTIVE MAINTENANCE GUIDE DE-AB01-03ME04154.M000

General Services Administration Preventive Maintenance Guide
Effective Date: January, 1995

P-4 Pump, Centrifugal
Frequency: Annual

Special Instructions:

1. Review manufacturer's instructions.
2. Review the Standard Operating Procedure for "Controlling Hazardous Energy Sources".
3. Pump maintenance should be scheduled to coincide with drive motor maintenance , and fire pump maintenance where applicable.
4. De energize, lock out and tag circuit, except where noted.
5. For replacement of mechanical seals, see the addendum at the end of this guide. It is generally not a good idea to tamper with pumps using mechanical seals if they are otherwise performing properly. Since mechanical seals can cost as much as the pump, it is usually not cost effective to risk damaging the seal by performing an annual internal inspection of the pump.

Check points:

1. Mechanical Seals:
   a. Refer to manufacturer's instructions. Generally, the only maintenance required would be lubrication of the seal faces with oil or grease. The type of lubricant used depends upon the pump service. Many applications require no lubrication other than from the liquid being pumped.
   b. Visually inspect the energized pump and motor.
      1). Look for fluid leaks originating from the area of the mechanical seal. Replace seal even if leaking only slightly.
      2). Look for fluid leaks from other areas of the pump, flanges and gaskets, pressure gauges and fittings, bypass tubes or piping, and air release valves.
      3). Look for bearing oil or grease leaks.
      4). Observe coupling for excessive noise or obvious misalignment.
      5). Observe fluid temperatures, pressures, and bearing temperatures if thermometers and pressure gauges are available.
   c. Deenergize pump and motor.
   d. Observe pump and motor during shutdown. Often times, vibration and bearing problems become more noticeable during a coasting slowdown of the pump and motor.
   e. Close suction and any bypass valves. Bleed off pressure but do not drain pump. Observe pressure gauges for signs that the discharge check valve is not closing tightly.
   f. Close discharge valve. Bleed off pressure but do not drain pump. Observe pressure gauges for signs that the discharge and suction valves are not closing tightly.
   g. Lubricate pump and motor bearings. **DO NOT OVER LUBRICATE**
   h. Use a torque wrench to check the tightness of all bolts, especially the bolts of cast iron pumps.
   i. Closely inspect the pump-motor coupling.
   j. Check motor and pump alignment.
   k. Inspect and clean suction strainers and blowdown valves.
   l. Clean pump and casing surfaces.
2. Other pumps:
   a. Check that base bolts are securely fastened.
   b. After shut-down, drain pump housing, check suction, discharge and check valve for holding.
   c. Remove cover gland and packing.
   d. Remove corrosion from impeller shaft and housing cover.

e. On pumps with oil ring lubricated bearings, drain oil, flush, and fill to proper oil level with new approved type oil.
f. Inspect water rings, seals, and impeller.
g. Clean pump suction strainers, and pump packing water seal filter/strainer.
h. Replace packing, and reassemble.
i. Start and stop pump, noting vibration, pressure, and action of check valve.
j. Adjust packing.
k. Lubricate impeller shaft bearings. Do not over lubricate.
l. Check motor and pump alignment.
m. Check drive shaft coupling.
3. Clean up work area and remove all debris.

COUPLING SIZE	ALLOWABLE ALIGNMENT
1"-2"	0.101 Total ind. reading
Over 2"-4"	0.015 Total ind. reading
Over 4"-7"	0.020 Total ind. reading

Recommended Tools, Materials, and Equipment:

1. Tool Group C
2. Alignment indicator
3. Grease gun
4. Cleaning equipment and materials. Consult the Material Safety Data Sheets (MSDS) for hazardous ingredients and proper personal protective equipment (PPE).
5. Hoist assembly for large pumps.

Addendum: Centrifugal Pump Mechanical Packing

Special Instructions:

1. Review the Standard Operating Procedure for "Controlling Hazardous Energy Sources".
2. When replacing a mechanical seal on a pump, it is important that the seal is designed for the type and temperature of the liquid to be pumped.
3. De energize, lock out and tag circuit. Close off pump suction and discharge valves. Drain pump housing.
4. A balanced mechanical seal can fail suddenly on start-up. Stand in a safe location out of range of the potential gland spray area when starting the pump.
5. When installing mechanical seals that utilize gland bolts as seal retainers, be very careful to level the gland bolts, centering the bolts horizontally on the split of a split case pump.

Procedure:

1. Disconnect and remove pump/motor coupling from pump shaft.
2. Clean external pump housing and shaft, remove flange on pump housing to remove pump mechanical seal assembly while noting how the seal is assembled on the shaft and in the pump housing.
3. After old seal has been removed, clean surfaces of shaft sleeve. If this sleeve is galled or damaged, a new seal will not hold for long. It is best to replace the shaft sleeve at this time. If the shaft sleeve is not damaged, follow seal manufacturer's instructions and install new mechanical seal. Install new pump

housing "O" ring or gasket, reinstall pump housing. Slowly open discharge and suction valve, then rotate pump shaft to assist in setting mechanical seal. Check alignment of pump and motor couplings. The use of shims may be necessary under the motor or pump to align the pump coupling with the motor coupling.
4. Examine both suction and discharge pressure gauges if they are not registering 0 psig. Replace one or both gauges if defective. Open pump suction and discharge valves, vent air out of pump housing. Log static pressure, if any, from pump suction gauge. Start pump motor, record pump operating suction and discharge pressures. Any unusual noises should be investigated and corrected before allowing pump to be put back in service. Record pump motor voltage and operating amps. Restore pump to service, remove tag.
5. Clean up work area.

P-4 Pump, Centrifugal
Frequency: Annual

ATTACHMENT 4 GENERAL SERVICES ADMINISTRATION PREVENTIVE MAINTENANCE GUIDE DE-AB01-03ME04154.M000

General Services Administration Preventive Maintenance Guide
Effective Date: March, 1993

R-4 Central Chilled Water Package Unit:Comfort Cooling or Drinking Water,Special Purpose or Computer Cooling
Frequency:
Annual
Quarterly

Application:

This guide card applies to chilled water producing units that are self-contained, consisting of refrigeration compressors, air cooled condenser, chilled water coils, refrigerant receivers, fan and motor, etc., contained in a common housing or assembly.

These units are normally installed where:

1. Several packaged air conditioning units are required for seasonal service. One central chilled water packaged unit will serve several packaged air conditioning units.
2. Drinking water is cooled at a central location and circulated to remote fountains.

Special Instructions:

1. If necessary, schedule shutdown with operating personnel.
2. Review manufacturer's instructions.
3. Review the Standard Operating Procedure for "Controlling Hazardous Energy Sources".
4. Deenergize, lock out, and tag electrical circuits serving motor when applicable.
5. Comply with the latest provisions of the Clean Air Act and Environmental Protection Agency (EPA) regulations as they apply to protection of stratospheric ozone.
6. No intentional venting of refrigerants is permitted. During the servicing, maintenance, and repair of refrigeration equipment, the refrigerant must be recovered.
7. Whenever refrigerant is added or removed from equipment, record the quantities on the appropriate forms.
8. Recover, recycle, or reclaim the refrigerant as appropriate.
9. If disposal of the equipment item is required, follow regulations concerning removal of refrigerants and disposal of the item.
10. If materials containing refrigerants are discarded, comply with EPA regulations as applicable.
11. Refrigerant oils to be removed for disposal must be analyzed for hazardous waste and handled accordingly.
12. Closely follow all safety procedures described in the Material Safety Data Sheet (MSDS) for the refrigerant and all labels on refrigerant containers.
13. Remove access covers prior to accomplishing check points.

Check Points:

1. Condenser.
   a. Remove debris from air screen and clean underneath unit.
   b. Pressure wash coil with proper cleaning solution.
   c. Straighten fin tubes with fin comb.
   d. Check electrical connections for tightness. Check fused disconnect switches for condition and operation.
   e. Check mounting for tightness.
   f. Check for corrosion. Clean and treat with inhibitor as needed.

g. Clean fan blades.
h. Inspect pulleys, belts, couplings, etc.; adjust tension and tighten mountings as necessary. Change badly worn belts. Multi-belt drives should be replaced with matched sets.
i. Perform required lubrication and remove old or excess lubricant.
j. Inspect water cooled tubes for corrosion and scale. Clean if required.

2. Compressor(s).
a. Lubricate drive coupling.
b. Lubricate motor bearings (non-hermetic).
c. Check and correct alignment of drive couplings.
d. Inspect evaporator tubes for scale. Clean if required. Leak test tubes using a halogen leak detector or suitable substitute.
e. Add refrigerant per manufacturer's instructions if needed.
f. Check compressor oil level.
g. Run machine; check action of controls, relays, switches, etc. to see that:
(1). Compressor(s) run at proper settings.
(2). Suction and discharge pressures are proper.
(3). Outlet water temperature is set properly.
h. Check and adjust vibration eliminators. Replace as necessary.
i. Sample test the refrigerant and oil to verify compliance with the Air Conditioning and Refrigeration Institute standards. Based on the results, refrigerant may need to be replaced or recycled, and oil replaced.
j. Check and calibrate safety controls.

3. Controls.
a. Check operation of all relays, pilot valves, and pressure regulators.
b. Check resulting action of pressure sensing primary control elements such as diaphragms, bellows, inverted bells, and similar devices when activated by air, water, or similar pressure.

4. Motors.
a. Check ventilation ports for soil accumulations; clean if necessary.
b. Clean exterior of motor surfaces of soil accumulation.
c. Lubricate bearings according to manufacturer's recommendations.
(1). Remove filler and drain plugs (use zerk fittings if installed).
(2). Free drain hole of any hard grease (use piece of wire if necessary).
(3). Add grease. Use good grade lithium base grease unless otherwise specified.
d. Check motor windings for accumulation of soil. Blow out with low pressure air or vacuum as needed.
e. Check hold-down bolts and grounding straps for tightness.
f. Remove tags, start unit, and check for vibration or noise.

Recommended Tools, Materials, and Equipment:

1. Tool Groups A and B
2. Pressure washer
3. Fin comb
4. Paint brushes
5. Cleaning materials and equipment. Consult the Material Safety Data Sheets (MSDS) for hazardous ingredients and proper personal protective equipment (PPE).
6. Respirator
7. Safety goggles.
8. Gloves.
9. Self sealing quick disconnect refrigerant hose fittings
10. Refrigerant recovery/recycle unit
11. EPA/DOT approved refrigerant storage tanks.

12. Approved refrigerant.
13. Electronic leak detector.

R-4 Central Chilled Water Package Unit:Comfort Cooling or Drinking Water, Special Purpose or Computer Cooling
Frequency:
Annual
Quarterly

ATTACHMENT 4 GENERAL SERVICES ADMINISTRATION PREVENTIVE MAINTENANCE GUIDE DE-AB01-03ME04154.M000

General Services Administration Preventive Maintenance Guide
Effective Date: October, 1981

S-8 Strainer, Y-Type
Frequency: Annual

Application:

This guide card applies to those Y-type strainers that are at remote locations or that are not included under the guide card of equipment that they are associated with (i.e., guide cards P-4, U-1, V-3, etc., include the strainers, whereas guide cards A-11, H-1, V-6, etc. do not include the strainers).

Special Instructions:

The maintenance of Y-type strainers, as outlined by this guide card, should be scheduled to coincide with the maintenance of the equipment that they are associated with.

Check Points:

1. Secure strainer isolation valves.
2. Drain strainer housing.
3. Back flush if possible or remove and clean strainer cage, if applicable.
4. Replace cartridge type and clean out strainer housing, if applicable.
5. Reassemble unit or replace drain plug and open isolation valve.
6. Check unit for leaks.

Recommended Tools, Materials, and Equipment:

1. Standard Tools - basic
2. Hose and bucket
3. Gaskets or gasket material
4. Cartridge filter replacements

S-8 Strainer, Y-Type
Frequency: Annual

ATTACHMENT 4 GENERAL SERVICES ADMINISTRATION PREVENTIVE MAINTENANCE GUIDE DE-AB01-03ME04154.M000

General Services Administration Preventive Maintenance Guide
Effective Date: October, 1981

V-5 Valve, Manually Operated
Frequency:
Main Line or Critical -- Annual
Other Over Two Inches -- 5 years

Application:

This applies to valves other than those used on Fire Protection systems. Maintenance for valves used on fireprotection systems are described under the appropriate guide for the specific item of fire protection equipment.

Special Instructions:

If materials to be worked on are known or suspected to contain asbestos, check the building's asbestos management plan to see if they have been tested for asbestos. If they are suspect but have not been tested, have them tested. Manage asbestos in accordance with the plan.

Check points:

1. Operate valve in full open/closed position. Loss of ability to close tightly will require inspection of valve seals and discs for wear and contaminant build-ups.
2. Check for sticking valve stems and lubricate stems and fittings sparingly.
3. Replace packing; dress, re-bush, or replace packing gland assembly, if required.
4. Check for freedom of motion on valves equipped with wheel and chain for remote operation.
5. Clean up work site.

Recommended Tools, Materials, and Equipment:

1. Tool Group C
2. Lubricants. Consult the Material Safety Data Sheets (MSDS) for hazardous ingredients and proper personal protective equipment (PPE).

V-5 Valve, Manually Operated
Frequency:
Main Line or Critical -- Annual
Other Over Two Inches -- 5 years

ATTACHMENT 4 GENERAL SERVICES ADMINISTRATION PREVENTIVE MAINTENANCE GUIDE DE-AB01-03ME04154.M000

General Services Administration Preventive Maintenance Guide
Effective Date: September, 1996

V-6 Valve, Motor Operated
Frequency: Annual

Application:

This guide card applies to those valves that use diaphragms, bellows, or small electric modulating motors to operate the valve with a spring return.

Special Instructions:

If materials to be worked on are known or suspected to contain asbestos, check the building's asbestos management plan to see if they have been tested for asbestos. If they are suspect but have not been tested, have them tested. Manage asbestos in accordance with the plan.

Check points:

1. Clean unit and make visual examination of all parts.
2. Operate from limit to limit. Observe operation, look for binding, sluggishness, action of limits, etc.
3. Determine if valve seats and holds properly.
4. Check condition of packing.
5. Check condition of dials and positioners.
6. Apply graphite to moving parts of valve.
7. Lubricate motor and gear box as necessary.
8. Inspect contacts, brushes, motor, controls, switches, etc. Clean and adjust as necessary.
9. Clean up work site.

Recommended Tools, Materials, and Equipment:

1. Tool Group C
2. Cleaning equipment and materials. Consult the Material Safety Data Sheets (MSDS) for hazardous ingredients and proper personal protective equipment (PPE).
3. Lubricants. Consult the MSDS for hazardous ingredients and proper PPE.

V-6 Valve, Motor Operated
Frequency: Annual

ATTACHMENT 5
DE-AB01-03ME04154.M000

GENERAL DECISION DC020003 03/08/02 DC3
General Decision Number DC020003

Superseded General Decision No. DC010003

State: WASHINGTON,D.C.

Construction Type:
BUILDING

County(ies):
WASHINGTON, D.C.

BUILDING CONSTRUCTION PROJECTS (Does not include single family homes and apartments up to and including 4 stories)

Modification Number	Publication Date
0	03/01/2002
1	03/08/2002

COUNTY(ies):
WASHINGTON, D.C.

ASBE0024A 10/01/2001

	Rates	Fringes
ASBESTOS WORKERS/HEAT AND FROST INSULATORS		
Includes application of all insulating materials, protective coverings, coatings and finishes to all types of mechanical systems. Also the application of firestopping material for wall openings and penetrations in walls, floors, ceilings and curtain walls.	24.02	7.94

ASBE0024B 10/01/2000

	Rates	Fringes
HAZARDOUS MATERIAL HANDLER		
Includes preparation, wetting, stripping, removal, scrapping, vacuuming, bagging and disposing of all insulation materials, whether they contain asbestos or not, from mechanical systems.	13.00	2.83

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* BRDC0001A 07/29/2001

	Rates	Fringes
BRICKLAYERS	22.92	5.05

CARP0132L 05/01/2001

ATTACHMENT 5
DE-AB01-03ME04154.M000

	Rates	Fringes
CARPENTERS (Including Drywall Hanging)	20.72	3.76
PILEDRIVERS	19.65	4.50

ELEC0026C 12/06/1999

	Rates	Fringes
COMMUNICATION TECHNICIANS	19.00	3.49

SCOPE OF WORK:

Includes low voltage construction, installation, maintenance and removal of teledata facilities (voice, data and video) including outside plant, telephone and data inside wire, interconnect, terminal equipment, central offices, PABX, fiber optic cable and equipment, railroad communications, micro waves,

V SAT, bypass, CATV, WAN (Wide area networks), LAN (Local area networks) and ISDN (Integrated systems digital network).

WORK EXCLUDED:

The installation of computer systems in industrial applications such as assembly lines, robotics and computer controller manufacturing systems.
The installation of conduit and/or raceways shall be installed by Inside Wiremen. On sites where there is no Inside Wireman employed, the Teledata Technician may install raceway or conduit not greater than 10 feet.
Fire alarm work is excluded on all new construction sites or wherever the fire alarm system is installed in conduit.
All HVAC control work.

ELEC0026T 06/04/2001

	Rates	Fringes
ELECTRICIANS (Excluding Communication Low Voltage Wiring)	27.08	6.69 + 3%

ENGI0077O 05/01/2001

	Rates	Fringes
POWER EQUIPMENT OPERATORS		
Cranes (35 tons and over)	22.29	4.77+a
Cranes (under 35 tons)	21.83	4.77+a
Piledrivers	21.83	4.77+a
Boom Trucks	21.12	4.77+a
Forklifts	15.00	4.77+a

a. PAID HOLIDAYS: New Year's Day, Inaugural Day, Decoration Day, Independence Day, Labor Day, Martin Luther King's Birthday, Veterans' Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.

ATTACHMENT 5
DE-AB01-03ME04154.M000

IRON0005A 06/01/2001

	Rates	Fringes
IRONWORKERS:		
Structural, Ornamental and Chain Link Fence	22.53	8.055

IRON0201C 05/01/2001

	Rates	Fringes
IRONWORKERS, REINFORCING	21.70	8.40

LABO0074A 06/01/2001

	Rates	Fringes
LABORERS:		
Skilled Laborers	16.02	2.95

SKILLED LABORERS:
Potmen, power tool operator, small machine operator, concrete labor, signalmen, laser beam operator, water-proofer, open caisson, test pit, underpinning, pier hole and ditches, laggers and overhead strippers, operator of hand derricks, vibrator operators, pipelayers, or tile layers, operators of jackhammers, paving breakers, spaders or any machine that does the same general type of work, scaffold builders, operators of towmasters, scootcretes, buggymobiles and other machines of similar character, operators of tampers and rammers, and other machines that do the same general type of work, whether powered by air, electric or gasoline builders of trestle scaffolds over one tier high and sand blasters.

LABO0456S 07/01/2001

	Rates	Fringes
LABORERS:		
Mason Tenders, Brick	12.77	2.95
Mortarmen	13.39	2.95

MARB0002C 05/01/2001

	Rates	Fringes
MARBLE & STONE MASONS (INCLUDES pointing, caulking and cleaning of All types of masonry, brick, stone and cement structures; EXCEPT pointing, caulking and cleaning of existing masonry, brick, stone and cement (restoration work)).	24.62	8.25

MARB0003I 05/01/2001

	Rates	Fringes
MOSAIC and TERRAZZO WORKERS,		

TILE LAYERS	19.18	7.01

MARB0003O 05/01/2001

	Rates	Fringes
MARBLE, TILE and TERRAZZO FINISHERS	15.79	6.05

PAIN0051D 06/16/2001

	Rates	Fringes
GLAZIERS		
Contracts over $2,000,000	21.82	5.74
Contracts $2,000,000 and under	20.62	5.74

PAIN0051M 06/16/2001

	Rates	Fringes
PAINTERS:		
Brush, Roller, Spray and Drywall Finishers	20.68	5.57

PLAS0891A 05/01/2001

	Rates	Fringes
CEMENT MASONS	20.52	3.895

PLUM0005I 09/01/2001

	Rates	Fringes
PLUMBERS:		
Apartment Buildings over 4 stories (except hotels)	17.53	5.59
ALL Other Work	26.82	8.59

PLUM0602F 08/01/2001

	Rates	Fringes
STEAMFITTERS, REFRIGERATION AND AIR CONDITIONING MECHANICS (Including HVAC Pipe Work)	26.71	8.68+a

a.PAID HOLIDAYS: Labor Day, Christmas Day and New Year's Day.

SFDC0669A 04/01/2001

	Rates	Fringes
SPRINKLER FITTERS	25.20	7.00

SHEE0100B 07/01/2001

	Rates	Fringes
SHEET METAL WORKERS (Including HVAC Duct Work)	26.18	7.41

ATTACHMENT 5
DE-AB01-03ME04154.M000

SUDC1003A 04/12/2000

	Rates	Fringes
LABORERS:		
Unskilled	11.83	2.23
POINTERS, CAULKERS, CLEANERS (INCLUDES pointing, caulking and cleaning of existing masonry, brick, stone and cement structures (restoration work); EXCLUDES pointing, caulking and cleaning of new or replacement masonry, brick, stone and cement)	20.00	

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(v)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations

ATTACHMENT 5
DE-AB01-03ME04154.M000

Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

ATTACHMENT 6
DE-AB01-03ME04154.M000

GENERAL DECISION **MD020056** 04/18/2003 MD56

Date: April 18, 2003
General Decision Number **MD020056**

Superseded General Decision No. MD010056

State: Maryland

Construction Type:
BUILDING

County(ies):
MONTGOMERY

BUILDING CONSTRUCTION PROJECTS (Does not include single family homes and apartments up to and including 4 stories)

Modification Number	Publication Date
0	03/01/2002
1	04/12/2002
2	05/03/2002
3	06/21/2002
4	07/05/2002
5	08/09/2002
6	09/06/2002
7	10/04/2002
8	10/18/2002
9	11/29/2002
10	02/14/2003
11	03/14/2003
12	04/04/2003
13	04/18/2003

COUNTY(ies):
MONTGOMERY

ASBE0024A 03/01/2003

	Rates	Fringes
ASBESTOS WORKERS/HEAT AND FROST INSULATORS Includes application of all insulating materials, protective coverings, coatings and finishes to all types of mechanical systems. Also the application of firestopping material for wall openings and penetrations in walls, floors, ceilings and curtain walls.	23.35	10.35

ASBE0024B 03/01/2003

ATTACHMENT 6
DE-AB01-03ME04154.M000

	Rates	Fringes
HAZARDOUS MATERIAL HANDLER Includes preparation, wetting, stripping, removal, scrapping, vacuuming, bagging and disposing of all insulation materials, whether they contain asbestos or not, from mechanical systems.	12.37	3.91

ELEC0026C 09/02/2002

	Rates	Fringes
COMMUNICATION TECHNICIANS	20.60	5.09

SCOPE OF WORK:

Includes low voltage construction, installation, maintenance and removal of teledata facilities (voice, data and video) including outside plant, telephone and data inside wire, interconnect, terminal equipment, central offices, PABX, fiber optic cable and equipment, railroad communications, micro waves, V SAT, bypass, CATV, WAN (Wide area networks), LAN (Local area networks) and ISDN (Integrated systems digital network).

WORK EXCLUDED:

The installation of computer systems in industrial applications such as assembly lines, robotics and computer controller manufacturing systems.
The installation of conduit and/or raceways shall be installed by Inside Wiremen. On sites where there is no Inside Wireman employed, the Teledata Technician may install raceway or conduit not greater than 10 feet.

Fire alarm work is excluded on all new construction sites or wherever the fire alarm system is installed in conduit.
All HVAC control work.

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* ELEC0026R 02/03/2003

	Rates	Fringes
LIGHTNING PROTECTION TECHNICIANS	19.16	4.00+3%

ELEC0026S 11/04/2002

	Rates	Fringes
ELECTRICIANS (Excluding Communication Low Voltage Wiring and Lightning Protection Wiring)	28.35	7.77 + 3%

ENGI0077Q 05/01/2002

	Rates	Fringes
POWER EQUIPMENT OPERATORS		
Cranes, 35 ton and above	23.29	5.12+a+b
Boom Trucks	22.12	5.12+a

ATTACHMENT 6
DE-AB01-03ME04154.M000

a. PAID HOLIDAYS: New Year's Day, Inaugural Day, Decoration Day, Independence Day, Labor Day, Martin Luther King's Birthday, Veterans' Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.
b. PREMIUM PAY: Tower cranes and cranes 100-ton and over to receive $1.00 per hour premium over Group One.

IRON0201A 05/01/2002

	Rates	Fringes
IRONWORKERS:		
Reinforcing	22.15	9.05

PAIN0051D 06/16/2002

	Rates	Fringes
GLAZIERS		
Contracts over $2,000,000	22.26	6.09
Contracts $2,000,000 and under	21.06	6.09

PAIN0051L 06/16/2002

	Rates	Fringes
PAINTERS:		
Brush, Roller, Spray	21.14	5.92

PLUM0005E 08/01/2002

	Rates	Fringes
PLUMBERS:		
Apartment Buildings over 4 stories (except hotels), schools, colleges, and speculative office buildings, strip shopping centers, churches, water coolers, room air conditioning units, appliances, packaged ice machines, and light commercial refrigeration and/or air conditioning systems serving a single business in a single story building and not to exceed 5 h.p. or tons, self-contained package unit up to and including 5 h.p. or tons.	18.03	6.09
All other work	27.67	9.24

PLUM0602F 08/01/2002

	Rates	Fringes
STEAMFITTERS, REFRIGERATION AND AIR CONDITIONING MECHANICS (Including HVAC Pipe Work)	27.52	9.37+a

a.PAID HOLIDAYS: New Year's Day, Independence Day, Thanksgiving

Day and the day after Thanksgiving Day, Labor Day and Christmas Day.

ROOF0030X 05/01/2002

	Rates	Fringes
ROOFERS	21.10	5.96

SFMD0669B 04/01/2003

	Rates	Fringes
SPRINKLER FITTERS	27.10	7.60

SHEE0100B 07/01/2002

	Rates	Fringes
SHEET METAL WORKERS (Including HVAC Duct Work)	26.88	8.06

SUMD1043A 05/12/2000

	Rates	Fringes
BRICKLAYERS	19.39	3.30
CARPENTERS	15.51	1.93
DRYWALL FINISHERS	14.00	0.58
IRONWORKERS, STRUCTURAL	15.82	3.85
LABORERS:		
Unskilled	10.35	1.13
Landscape	9.23	
Mason Tenders, Brick	10.97	.77
Rakers	11.06	0.25
POWER EQUIPMENT OPERATORS:		
Backhoes	16.07	5.26
Excavators	14.50	
Loaders	14.68	4.29
Rollers	13.85	1.75
Screeds	12.22	1.14
TILE SETTERS	17.76	3.00
TILE FINISHERS	12.09	2.32

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

ATTACHMENT 6
DE-AB01-03ME04154.M000

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.

Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

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Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

SIMPLIFIED ACQUISITION CONTRACT CLAUSES FIXED-PRICE CONSTRUCTION

FAR 52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this address: http://www.arnet.gov/far/

The following clauses are applicable when indicated (checked) in the first column:

___ FAR 52.202-1 Definitions. Alternate I (Dec 2001)
___ FAR 52.203-3 Gratuities. (Apr 1984)
___ FAR 52.203-7 Anti-Kickback Procedures. (Jul 1995)
___ FAR 52.203-8 Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity. (Jan 1997)
___ FAR 52.203-10 Price or Fee Adjustment for Illegal or Improper Activity. (Jan 1997)
___ FAR 52.204-1 Approval of Contract. (Dec 1989)
___ FAR 52.204-3 Taxpayer Identification. (Oct 1998)
___ FAR 52.204-6 Data Universal Numbering System (DUNS) Number. (June 1999)
___ FAR 52.204-2 Security Requirements (Aug 1996)
___ FAR 52.209-5 Certification Regarding Debarment, Suspension, Proposed Debarment, and Other Responsibility Matters. (Dec 2001)
___ FAR 52.209-6 Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment. (Jul 1995)
___ FAR 52.211-6 Brand Name or Equal. (Aug 1999)
___ FAR 52.211-12 Liquidated Damages - Construction. (Sept 2000)
___ FAR 52.211-12 Liquidated Damages - Construction. (APR 1984) -- **Alternate I** (APR 1984).
___ FAR 52.211-13 Time Extensions. (Sept 2000)
___ FAR 52.211-15 Defense Priority and Allocation Requirements. (Sep 1990)
___ FAR 52.211-18 Variation in Estimated Quantity. (Apr 1984)
___ FAR 52.212-4 Contract Terms and Conditions-Commercial Items. (Feb 2002)
_✓_ FAR 52.215-8 Order of Precedence--Uniform Contract Format. (Oct 1997)
_✓_ FAR 52.215-17 Waiver of Facilities Capital Cost of Money. (Oct 1997)
___ FAR 52.215-21 Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data--Modifications. (Oct 1997)
___ FAR 52.216-4 Economic Price Adjustment--Labor and Material. (Jan 1997)
___ FAR 52.216-5 Price Redetermination--Prospective. (Oct 1997)
___ FAR 52.216-6 Price Redetermination--Retroactive. (Oct 1997)
___ FAR 52.219-3 Notice of Total HUBZone Set-Aside. (Jan 1999)
___ FAR 52.219-4 Notice of Price Evaluation Preference for HUBZone Small Business Concerns. (Jan 1999)
___ FAR 52.219-5 Very Small Business Set-Aside. (Mar 1999)
___ FAR 52.219-5 Very Small Business Set-Aside. **Alternate I** (Mar 1999).
___ FAR 52.219-6 Notice of Total Small Business Set-Aside. (Jul 1996)
_✓_ FAR 52.222-1 Notice to the Government of Labor Disputes. (Feb 1997)
_✓_ FAR 52.222-3 Convict Labor. (Aug 1996)
_✓_ FAR 52.222-6 Davis-Bacon Act. (FEB 1995)
_✓_ FAR 52.222-7 Withholding of Funds. (FEB 1988)
_✓_ FAR 52.222-8 Payrolls and Basic Records. (FEB 1988)
_✓_ FAR 52.222-9 Apprentices and Trainees. (FEB 1988)
_✓_ FAR 52.222-10 Compliance with Copeland Act Requirements. (FEB 1988)

_✓_ FAR 52.222-11 Subcontracts (Labor Standards). (FEB 1988)
_✓_ FAR 52.222-12 Contract Termination - Debarment. (FEB 1988)
_✓_ FAR 52.222-13 Compliance with Davis-Bacon and Related Act Regulations. (FEB 1988)
_✓_ FAR 52.222-14 Disputes Concerning Labor Standards.
_✓_ FAR 52.222-15 Certification of Eligibility.
_✓_ FAR 52.222-21 Prohibition of Segregated Facilities. (Feb 1999)
_✓_ FAR 52.222-26 Equal Opportunity. (Apr 2002)
___ FAR 52.222-26 Equal Opportunity. **Alternate I** (Feb 1999).
_✓_ FAR 52.222-27 Affirmative Action Compliance Requirements for Construction. (Feb 1999)
_✓_ FAR 52.222-35 Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era. (Dec 2001)
_✓_ FAR 52.222-36 Affirmative Action for Workers with Disabilities. (Jun 1998)
___ FAR 52.222-37 Employment Reports on Disabled Veterans and Veterans of theVietnam Era. (Dec 2001)
___ FAR 52.223-3 Hazardous Material Identification and Material Safety Data. (Jan 1997)
___ FAR 52.223-3 Hazardous Material Identification and Material Safety Data. **Alternate I** (July 1995).
___ FAR 52.223-4 Recovered Material Certification. (Oct 1997)
___ FAR 52.223-5 Pollution Prevention and Right-to-Know Information. (Apr 1998)
___ FAR 52.223-6 Drug-Free Workplace. (May 2001)
___ FAR 52.223-10 Waste Reduction Program. (Aug 2000)
___ FAR 52.224-2 Privacy Act. (Apr 1984)
___ FAR 52.225-13 Restrictions on Certain Foreign Purchases. (July 2000)
___ FAR 52.225-14 Inconsistency between English Version and Translation of Contract. (Feb 2000)
___ FAR 52.225-16 Sanctioned European Union Country Services. (Feb 2000)
___ FAR 52.226-1 Utilization of Indian Organizations and Indian-Owned Economic Enterprises. (June 2000)
___ FAR 52.227-1 Authorization and Consent. (Jul 1995)
___ FAR 52.227-4 Patent Indemnity--Construction Contracts. (Apr 1984)
___ FAR 52.227-4 Patent Indemnity--Construction Contracts. (Apr 1984) Alternate I (Apr 1984)
___ FAR 52.227-9 Refund of Royalties. (Apr 1984)
___ FAR 52.227-10 Filing of Patent Applications--Classified Subject Matter. (Apr 1984)
___ FAR 52.227-11 Patent Rights--Retention by the Contractor (Short Form). (Jun 1997)
___ FAR 52.227-17 Rights in Data - Special Works. (JUN 1987)
___ FAR 52.227-23 Rights to Proposal Data (Technical). (June 1987)
___ FAR 52.228-2 Additional Bond Security. (Oct 1997)
___ FAR 52.228-5 Insurance--Work on a Government Installation. (Jan 1997)
___ FAR 52.228-11 Pledges of Assets. (FEB 1992)
___ FAR 52.228-15 Performance and Payment Bonds- Construction. (July 2000)
___ FAR 52.228-13 Alternative Payment Protections. (July 2000)
___ FAR 52.228-14 Irrevocable Letter of Credit. (Dec 1999)
_✓_ FAR 52.232-5 Payments under Fixed-Price Construction Contracts. (May 1997)
___ FAR 52.232-23 Assignment of Claims. (JAN 1986)
___ FAR 52.232-24 Prohibition of Assignment of Claims. (JAN 1986)
_✓_ FAR 52.232-27 Prompt Payment for Construction Contracts. (Feb 2002)
_✓_ FAR 52.232-33 Mandatory Information for Electronic Funds Transfer Payment. (May 1999)
___ FAR 52.232-34 Payment by Electronic Funds Transfer—Other than Central Contractor Registration. (May 1999)
___ FAR 52.232-35 Designation of Office for Government Receipt of Electronic Funds Transfer Information. (May 1999)
___ FAR 52.232-36 Payment by Third Party. (May 1999)
___ FAR 52.232-37 Multiple Payment Arrangements. (May 1999)
___ FAR 52.233-1 Disputes. (Dec 1998)
___ FAR 52.233-1 Disputes. **Alternate I** (DEC 1991).
_✓_ FAR 52.233-3 Protest after Award. (AUG 1996)

_✓_ FAR 52.236-2 Differing Site Conditions. (APR 1984)
_✓_ FAR 52.236-3 Site Investigation and Conditions Affecting the Work. (APR 1984)
_✓_ FAR 52.236-5 Material and Workmanship. (APR 1984)
_✓_ FAR 52.236-6 Superintendence by the Contractor. (APR 1984)
_✓_ FAR 52.236-7 Permits and Responsibilities. (NOV 1991)
_✓_ FAR 52.236-8 Other Contracts. (APR 1984)
_✓_ FAR 52.236-9 Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements (APR 1984)
_✓_ FAR 52.236-10 Operations and Storage Areas. (APR 1984)
_✓_ FAR 52.236-11 Use and Possession Prior to Completion. (APR 1984)
_✓_ FAR 52.236-12 Cleaning Up. (APR 1984)
_✓_ FAR 52.236-13 Accident Prevention. (NOV 1991)
_✓_ FAR 52.236-13 Accident Prevention. **Alternate I** (NOV 1991).
_✓_ FAR 52.236-14 Availability and Use of Utility Services. (APR 1984)
_✓_ FAR 52.236-16 Quantity Surveys. (APR 1984)
_✓_ FAR 52.236-17 Layout of Work. (APR 1984)
_✓_ FAR 52.236-21 Specifications and Drawings for Construction. (FEB 1997)
___ FAR 52.236-26 Preconstruction Conference. (Feb 1995)
___ FAR 52.237-2 Protection of Government Buildings, Equipment, and Vegetation. (Apr 1984)
___ FAR 52.242-1 Notice of Intent to Disallow Costs. (Apr 1984)
_✓_ FAR 52.242-13 Bankruptcy. (JUL 1995)
_✓_ FAR 52.242-14 Suspension of Work. (APR 1984)
_✓_ FAR 52.243-5 Changes and Changed Conditions. (APR 1984)
___ FAR 52.243-7 Notification of Changes. (APR 1984)
___ FAR 52.244-6 Subcontracts for Commercial Items and Commercial Components. (May 2002)
___ FAR 52.245-3 Identification of Government-Furnished Property. (Apr 1984)
___ FAR 52.245-4 Government-Furnished Property (Short Form). (APR 1984)
___ FAR 52.245-9 Use and Charges. (APR 1984)
___ FAR 52.245-18 Special Test Equipment. (FEB 1993)
___ FAR 52.245-19 Government Property Furnished "As Is." (APR 1984)
___ FAR 52.246-11 Higher-Level Contract Quality Requirement. (Feb 1999)
_✓_ FAR 52.246-12 Inspection of Construction. (AUG 1996)
_✓_ FAR 52.246-21 Warranty of Construction. (MAR 1994)
___ FAR 52.246-25 Limitation of Liability--Services. (Feb 1997)
___ FAR 52.247-1 Commercial Bill of Lading Notations. (Apr 1984)
___ FAR 52.247-34 F.o.b. Destination. (Nov 1991)
___ FAR 52.247-64 Preference for Privately Owned U.S.-Flag Commercial Vessels. (Jun 1997)
___ FAR 52.249-2 Termination for Convenience of the Government (Fixed-Price). **Alternate III** (Sep 1996).
_✓_ 52.249-10 Default (Fixed-Price Construction). (APR 1984) -- **Alternate II** (APR 1984)
___ FAR 52.250-1 Indemnification Under Public Law 85-804. (Apr 1984)
___ FAR 52.251-1 Government Supply Sources. (APR 1984)
___ FAR 52.253-1 Computer Generated Forms. (JAN 1991)